REPORT

OF THE

INDIAN HEMP DRUGS COMMISSION,

1893-94.

President:

The Hon'ble W. MACKWORTH YOUNG, M.A., C.S.I., First Financial Commissioner, Punjab.

Members:

1. Mr. H. T. OMMANNEY, Collector, Panch Mahals, Bombay.
2. Mr. A. H. L. FRASER, M.A., Commissioner, Chhattisgarh Division, Central Provinces.
3. Surgeon-Major C. J. H. WARDEN, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta; Officiating Medical Storekeeper to Government, Calcutta.
4. Raja SOSHI SIKHARESWAR ROY, of Tahirpur, Bengal.
5. KANWAR HARNAM SINGH, Ahluwalia, C.I.E., Punjab.
6. LALA NIHAL CHAND, of Muzaffarnagar, North-Western Provinces.

Secretary:

Mr. H. J. McINTOSH, Under-Secretary to the Government of Bengal, Financial and Municipal Departments.



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CHAPTER I.

INTRODUCTORY.

Appointment of the Commission: its object.

1. The Indian Hemp Drugs Commission was appointed under the orders of His Excellency the Governor-General in Council contained in the Resolution of the Government of India, Finance and Commerce Department, No. 2792-Ex., dated 3rd July 1893. In a despatch No. 36 (Revenue), dated 16th March 1893, Her Majesty's Secretary of State informed the Government of India that in answer to a question* put in the House of Commons he had expressed his willingness to request the Government of India to appoint a Commission to inquire into the cultivation of the hemp plant in Bengal, the preparation of drugs from it, the trade in those drugs, the effect of their consumption upon the social and moral condition of the people, and the desirability of prohibiting the growth of the plant and the sale of ganja and allied drugs. In requesting the Government of India to appoint a Commission for the purposes stated, the Secretary of State desired that such instructions might be issued as would ensure that the inquiry should be thorough and complete. Lord Kimberley was of opinion that the inquiry could hardly be confined to Bengal, but should extend to the whole of India, and that the Commission should ascertain to what extent the existence of the hemp plant all over India affects the practical difficulty of checking or stopping the consumption of ganja as distinguished from other narcotic drugs prepared from the hemp plant, and whether there is ground for the statement that bhang is less injurious than ganja to consumers.

Constitution of the Commission.

2. The Commission appointed by the Government of India Resolution of 3rd July 1893 consisted of a President and six Members, three of whom were officials and three Native non-official gentlemen. Under subsequent orders, a Secretary to the Commission was appointed.†

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* By Mr W. S Caine on 2nd March 1893.

† *President.*

The Hon'ble W. Mackworth Young, M A, C S I., First Financial Commissioner, Punjab.

Members

1. Mr. H. T. Ommanney, Collector, Panch Mahals, Bombay
2. Mr A H. L Fraser, M A, Commissioner, Chhattisgarh Division, Central Provinces
3. Surgeon-Major C. J H. Warden, Professor of Chemistry, Medical College, and Chemical Examiner to Government, Calcutta, Officiating Medical Storekeeper to Government, Calcutta
4. Raja Soshi Sikhareswar Roy, of Tahirpur, Bengal.
5. Kanwar Harnam Singh, Ahluwalia, C.I.E., Punjab.
6. Lala Nihal Chand, of Muzaffarnagar, North-Western Provinces.

Secretary:

Mr. H. J. McIntosh, Under-Secretary to the Government of Bengal, Financial and Municipal Departments.

3. In pursuance of the wishes of the Secretary of State, the following instructions were issued to the Commission:—

Instructions to the Commission—

"His Excellency the Governor-General in Council desires that the inquiry should be thorough and searching, but he leaves to the Commission full discretion to determine the best means of securing that result. Certain instructions are given in the following paragraphs; but these are not intended to be exhaustive, and the Commission have full authority to take up any branch of inquiry which in their opinion is likely to elucidate the subject and to aid the Government of India and the Secretary of State in deciding on the policy to be adopted in regard to hemp drugs.

(a) Scope of inquiry.

"It is desirable that the Commission should visit and take evidence in all or most of the provinces of India: there are political objections to their holding sittings in Native States, but any information similar to that required regarding British India which can be obtained regarding Native States should be included in the Report.

"The Commission should ascertain, with as much precision as possible, the extent to which the hemp plant is cultivated in each of the provinces of India in which it is grown. They should collect full information as to the manner in which the plant is cultivated for the production of drugs and the methods of preparing the manufactured drug from the raw product, whether of the wild or the domesticated plant. Little is known at present as to the extent to which the wild plant can be used for the preparation of drugs, whether in the milder or the more noxious forms. This point has an important bearing on the possibility of introducing restrictive measures, and will require careful investigation. Full particulars should be obtained regarding all the different forms of the drug which are commonly used, especially ganja, charas, and bhang; and regarding the classes of the people by whom, and the extent to which, each is used. The physical and other effects of the use of hemp drugs should be thoroughly investigated, each variety of the drug being separately treated, so far as that can be conveniently done. In conducting this branch of the inquiry, the Commissioners should avail themselves freely of the evidence of medical experts. They should endeavour to ascertain what proportion of the population habitually consumes hemp drugs, and should thoroughly examine the testimony in support of the commonly received opinion that the use of hemp drugs is a frequent cause of lunacy. They should ascertain whether, and in what form, the consumption of the drugs is either harmless or even beneficial as has occasionally been maintained.

(b) Cultivation and wild growth of the hemp plant, manufacture and use of drugs obtained therefrom, and the physical and other effects of the use of hemp drugs.

"Full information should be compiled regarding the administrative arrangements in force in each province for controlling the growth of the plant, the manufacture and sale of the drugs, and their importation from other provinces or from Native States, and for imposing duties on cultivation and sale. It is understood that charas is imported into the Punjab on a considerable scale from foreign territory; and the question of the importation of hemp drugs generally from foreign territory should receive the special attention of the Commission. The various systems

(c) Methods of administration

employed for taxing the drug or the cultivation of the plant should be reviewed with special reference to the comparative incidence of this taxation in different parts of India and to the comparative efficacy of the taxation imposed in restricting consumption, whether by the mere weight of the tax or by the method and stage of imposition. It is known that the rates vary considerably in different provinces, but the precise effect of the variations is not fully understood. In this connection the Commissioners should notice any case in which the proximity of a Native State affects the production or consumption of the drug in British territory.

(d) Political discontent, social or religious usage, and other stimulants or narcotics.

"There are two points connected with the subject-matter of the inquiry which call for special investigation. The first of these is the danger lest prohibition, or restrictive measures of a stringent character, may give rise to serious discontent, and be resented by the people as an unjustifiable interference with long-established social customs. In some parts of India the use of hemp drugs is, it is believed, common among fakirs and ascetics held in veneration by large classes of the population. In Bengal it has been stated that an infusion of the leaves of the plant is commonly offered to every guest and member of the family on the last day of the Durga Puja: it has no ill effects, and its use is not considered reprehensible in any way. The Governor-General in Council desires that the Commissioners will endeavour to ascertain to what extent these and similar customs prevail in Bengal and other parts of India, and how far the use of hemp drugs forms a part of social, or possibly religious, ceremonial or observance, and they should, if possible, take the evidence of witnesses drawn from the classes among whom the use of hemp drugs is chiefly prevalent. The Commissioners should state their opinion whether the prohibition of the use of hemp drugs or any restrictive measures which they may deem practicable would be likely to give rise to political discontent in any parts of India or among any classes of the population. It is believed that in some parts of the country bhang is, in a special degree, the poor man's narcotic, and the possible unpopularity of a measure which would deprive the very poorest of the population of the use of a narcotic to which they have always been accustomed should not be overlooked.

"Another point to which the attention of the Commissioners should be directed is the probability or possibility that, if the use of hemp drugs is prohibited, those who would otherwise continue to use them may be driven to have recourse to alcohol, or to other stimulants or narcotics which may be more deleterious.

(e) Recommendations of the Commission.

"Finally, the Governor-General in Council requests that the Commissioners, if they should be of opinion that the prohibition of the consumption of any hemp drug should not, or could not, be enforced, will indicate, for the consideration of the Government of India, any reforms and improvements which their investigations may lead them to recommend in the existing arrangements of each province for controlling the cultivation of the hemp plant, and the manufacture, sale, and taxation of hemp drugs. In framing their recommendations, regard should, of course, be had to the considerations which have been stated in paragraphs 7 and 8 of this Resolution. Absolute prohibition, or repressive measures of a stringent nature, may involve inquisitorial proceedings of an unpopular character, and

afford opportunities for the levy of blackmail; and in framing regulations for the prohibition or for the restriction of the use of hemp drugs, these considerations should be borne in mind.

"If the Commission should be of opinion that the cultivation of the hemp plant for the production of drugs, or the consumption of any hemp drug, should be absolutely prohibited, it will be their duty to state the regulations which should be adopted for this purpose."

Commission's method of inquiry.

4. Under the terms of the Resolution appointing the Commission, they were directed to assemble in Calcutta on the 1st August 1893. The first collective meeting of the Commission actually took place on the 3rd August 1893. A series of questions was drawn up by the Commission for distribution to witnesses. The series of questions was prefaced by an explanatory note, in which it was carefully pointed out that they were not to be regarded as exhaustive, but were intended rather to serve as an index to the witnesses as to the subjects to which their attention should be specially directed. The witnesses were requested not to withhold any information merely because it was not indicated by any of the questions. They were invited to give any information which did not appear to fall under any of the questions, either by appending it as a separate note to the chapter under which it seemed naturally to fall, or by recording it at the end of the evidence. At the same time, as the questions were necessarily of wide and general application, it was pointed out that it was not intended that in every case the witness should answer all of them, but should confine himself to those questions which dealt with parts of the subject with which he was more or less acquainted; and, to enable the Commission to estimate the value of the information given, it was requested that the witness should indicate the source of his information and the facts or experiences on which he based his opinions and statements.

Invitation to persons interested to lay their views before the Commission.

5. Previous to issuing their series of questions to Local Governments and Administrations for distribution to witnesses, the Commission had intimated to them that they were anxious to receive evidence from well-informed persons and representative associations, whether philanthropic, religious, or social bodies, who desired to see the preparation and sale of gánja and other hemp drugs further restricted or entirely prohibited, and that it was necessary to give such persons and associations the freest opportunity of coming forward and laying their views before the Commission. To enable these persons and associations to place themselves in communication with the Commission, Local Governments and Administrations were requested to make it widely known through the Press, or in such other manner as might be suitable, that the Commission would be glad to receive written statements of their views, accompanied by an intimation as to whether the writer, or, in the case of an association or public body, a representative, would be willing to appear before the Commission for oral examination. The Commission themselves also addressed direct a number of associations and persons who were likely to be interested in the inquiry, and further communicated to the Press through Local Governments and Administrations a letter setting forth the wishes of the Commission in respect to such persons, and intimating, for the information of the public, their proposed movements and the method of their inquiry.

Selection of witnesses by Local Governments.

6. In circulating their questions to Local Governments and Administrations for distribution to suitable witnesses, the Commission took pains to explain that they attached much importance to a due proportion of non-official witnesses being selected, and requested that in the first place copies of the questions should be supplied to the persons or associations advocating restriction who might have availed themselves of the invitation to come forward and lay their views before the Commission. Should such persons or associations have held direct communication with the Commission, steps were taken by the Commission themselves to supply them with copies of the questions. In addition to this class of witnesses, Local Governments and Administrations were asked to place copies of the questions in the hands of official and non-official persons, European and Native, who either had special knowledge of the subject, or special facilities and aptitude for acquiring such knowledge. The classes of persons whose evidence the Commission desired to receive included revenue officers of experience, magisterial officers, police officers, medical officers, officers acquainted with special races of the people, zamindars, employers of labour, and the lower grades of officials, professional men, and missionaries of all denominations. Regarding the latter class, every effort was put forth by the Commission to obtain missionary opinion on the subject of their inquiries, and it is a matter of some regret to them that their efforts have met with but little success. Not only was it announced through Local Governments that the Commission desired to receive communications from religious bodies of all denominations, but the Commission themselves also communicated freely with persons of this class. But the large majority of them declined to come forward as witnesses, and many, including Churchmen, Dissenters, and Roman Catholics, communicated letters either to Government or direct to the Commission excusing themselves on the ground of want of knowledge. As an example of the want of knowledge of the subject or lack of interest in the inquiry evinced by missionaries, it may be observed that in one instance (in the Madras Presidency) the Commission made over 70 copies of their questions to two sects of missionaries professing to represent one-fifth of the whole missionary enterprise of the Madras Presidency. Yet the total number of missionaries in this Presidency who sent in answers or statements to the Commission (though some of them quoted the opinions of others) was only 15, many of whom do not belong to either of the two sects referred to. Special instructions were issued regarding two classes of witnesses. Firstly, in order to secure compliance with the orders of the Government of India that the evidence of medical experts should be freely obtained, it was requested that the questions should be distributed to selected medical officers, both European and Native. Emphasis was laid upon the importance of ascertaining the views of subordinate native medical officers whose duties bring them into contact with the people, and it was suggested that replies should either be obtained separately from competent officers of this class, or that they should be embodied in the replies received from Civil Surgeons. The evidence of private native medical practitioners of repute, especially of those practising after native methods, was also solicited. For the convenience of the medical experts, a separate compilation of the questions dealing only with that part of the subject with which this class of witness would be likely to be acquainted was made, the witnesses being left the option of dealing either with this abbreviated compilation or with the whole series of general ques-

tions as they saw fit. Secondly, attention was drawn to those questions which deal with the connection, causal or otherwise, of hemp drugs with crime with a view to the evidence of selected Magistrates and Police officers being obtained on this subject.

Information from official and other sources.

7. In addition to the evidence of witnesses, the Commission availed themselves freely of all information regarding the subject of their inquiry already existing in official reports and documents as well as in publications of a non-official character. Local Governments and Administrations were invited to furnish complete lists of such official reports and publications, printed copies of those of special importance being submitted. In addition to these, the Commissioner of Excise or Abkari of each province was asked to present a memorandum setting forth in detail the system of administration at present in force in respect to hemp drugs, accompanied by statistics, where available, for the last twenty years in a form drawn up by the Commission. These memoranda and statistics will be found in Vol. III Appendices. Information existing in non-official publications came to the notice of the Commission from many sources, and was utilized when trustworthy or found to be of value.

Preliminary tour: Objects and reasons of—

8. Shortly after assembling in Calcutta, the Commission were convinced that the period which had elapsed between the date of the appointment of the Commission and the date fixed for their assembling at Calcutta was too short to permit of their proceeding at once with the examination of witnesses. Sufficient time had not been allowed to the Commission to become generally acquainted with the system of administration in respect to hemp drugs prevailing in each province, or with the objections taken by certain persons or bodies to such systems. More important still, Local Governments and Administrations required time to enable them to bring before the Commission a selection of witnesses which would be fairly representative of the views and interests involved; and the witnesses themselves, whether selected by Government or coming forward of their own motion, required time to consider the conditions of the problem, and to set forth lucidly and in a manner which would be satisfactory both to themselves and to the Commission the opinions which they might entertain. Accordingly, with these objects in view, the Commission before proceeding to the examination of the witnesses made a preliminary visit to some provinces. The provinces visited, after Bengal, were the North-Western Provinces, the Central Provinces, Bombay, Madras, and the Punjab. Occasion was taken to study the systems in force in these provinces and the objections thereto, and, in communication with the Local Governments, to see that full effect had been given to the wishes of the Commission in the matter of selecting representative witnesses. The lists of witnesses prepared by Local Governments, so far as they were ready, were examined, and in many cases considerable additions were made. These lists were supplemented by increasing not only the number of witnesses selected from the different classes, but also the numbers of classes themselves. Every effort was made after local inquiry and in consultation with Local Governments to secure the representation of all classes and shades of opinion. In view of the ignorance which the Commission found to prevail generally regarding the use and effects of the drugs, it was found necessary to have a larger number of witnesses in every province

than was at first anticipated. During this tour this Commission as a whole, or in some cases Sub-Committees of the Commission, visited the head-quarters of some of the more important Native States to make arrangements for the collection of information in these States as desired by the Government of India. Opportunity was also taken by the Commission at this period of their inquiries to get at facts and opinions in an informal way; and with this object in view many visits were made by the Commission, or by members of the Commission (generally unexpectedly and under the guidance of private persons as well as of officials), to see cultivation and manufacture of hemp drugs, to ware-houses and to shops where these drugs are stored and sold, and to religious places and other places of resort where the drugs are consumed in some form or other. The results of these inquiries were sometimes recorded in notes, and some-times in the statements of persons who were then added to the list of witnesses. Inquiries were also held at many asylums, as will be explained in the following paragraph, which deals with the special inquiries made by the Commission in this direction.

Lunatic Asylums.

9. The Commission were especially enjoined to thoroughly examine the testimony in support of the commonly received opinion that the use of hemp drugs is a frequent cause of lunacy, and with this object have made very searching inquiries. In order to make this very important branch of their labours as complete and searching as possible, the procedure adopted in the different asylums of India in classifying and dealing with cases of insanity ascribed to the use of hemp drugs was specially examined, and the connection, whether causal or otherwise, between hemp drugs and insanity was investigated in minute detail. Every asylum in British India was visited either by the Commission or by some members of the Commission, and careful inquiries were conducted on the spot in every case of insanity attributed to the use of hemp drugs for a given period. The period selected for the whole of India was the calendar year 1892, the last year for which statistics were available at the commencement of the Commission's labours. Every case of insanity ascribed to hemp drugs in the asylums of India during the year 1892 has been specially inquired into in the asylum where the patient was confined, the papers and records of the case have been thoroughly examined, and instructions were issued to have a further local inquiry made by an experienced Magistrate, in consultation with the Civil Surgeon, to ascertain the past personal and family history of the patient and any circumstances likely to throw light on the cause of his insanity. The record of this inquiry, where made, has been submitted to the Commission through the Superintendent of the asylum concerned, who has thus had an opportunity of reconsidering the case with fuller information before him on which to base an opinion as to the cause of the insanity. Further, the statistics of insanity and the method of preparing and compiling these statistics have been subjected to a rigid scrutiny, and no opportunity has been lost of obtaining the evidence of medical experts, including Government officers, private practitioners of all classes, and Superintendents of Lunatic Asylums and their subordinates, as well as of non-professional persons, as to the relation between hemp drugs and insanity. The Commission have endeavoured to investigate and weigh the popular as well as the scientific view of this subject.

10. In regard to the alleged connection between hemp drugs and violent crime, the Commission, in addition to sifting the written and oral evidence, have examined the judicial and other records of cases which have been alluded to by the witnesses as forming the basis, or part of the basis, on which their opinions were framed.

Connection between hemp drugs and violent crime.

11. As stated above, the Commission were precluded by the orders of the Government of India from holding formal sittings in Native States, but nevertheless they have endeavoured to obtain full and complete information from all the most important Native States in India. In the case of Native States in political relation with the Government of India, the Commission, in some cases in personal communication with the Agent to the Governor-General or the Resident, and in other cases by letter, arranged for the collection of the required information. In some of the larger Agencies and States special officers were appointed, through the courtesy of the Agent to the Governor-General or the Darbar, to collect and compile the available information, and much useful information has thereby been placed at the disposal of the Commission. In the smaller States, and in States under the political control of Local Governments, a memorandum of the system in force, together with statistics so far as available, has generally been furnished by the Political Agent or a responsible officer of the State. Beyond giving the States in question such advice and assistance as they desired in respect to the best methods of conducting their inquiries, indicating clearly the points on which information was desired and supplying lists of questions where required, the Commission did not interfere in any way with the course of these inquiries or select or examine witnesses for themselves.

Native States.

12. One of the most important questions with which the Commission had to deal was the investigation of the proportion of the population which indulges in the use of hemp drugs, and of the classes among whom the use is prevalent. The Native Army appeared to offer a suitable field for inquiry in regard to this matter, and accordingly, with the permission of His Excellency the Commander-in-Chief, a series of questions dealing with this and other questions bearing upon the Commission's investigations was issued to all regiments of the British Native Army. The inquiries were made and the answers filled in by the Commanding Officers either with or without the assistance of their medical officers. The results obtained will be found in Chapter VIII.

The Army.

13. The Commission first assembled at Calcutta on 3rd August 1893, and after agreeing upon their general plan of operations, and concluding their preliminary arrangements, including the distribution of questions to witnesses, started on the preliminary tour described in paragraph 8 above. The provinces visited were the North-Western Provinces, the Central Provinces, Bombay, Madras, and the Punjab. The Commission were in the North-Western Provinces from 22nd August to 1st September, and had their head-quarters at Allahabad, where the principal Revenue officers of Government were assembled to meet them. During this period the asylums at Patna (Bengal), Lucknow, Bareilly, and Lucknow were visited by

Sketch of the proceedings of the Commission.

various members of the Commission, and one member proceeded to Naini Tal to consult with His Honour the Lieutenant-Governor on behalf of the Commission.

The Central Provinces were visited from 2nd to 11th September, the Commission's head-quarters being at Jubbulpore. The asylums at Jubbulpore and Nagpur were inspected, and some of the members met the Chief Commissioner at Pachmarhi. Some of the members also proceeded to Indore to consult the Agent to the Governor-General, and the Commission as a body had an opportunity of making themselves acquainted with the system of cultivation of the hemp plant for ganja which is centralized at Khandwa. From the Central Provinces the Commission travelled to Poona, where they remained from 12th to 18th September in communication with the Government, and where there was an important asylum to inspect. On the way from Poona to Madras the Resident of Mysore was visited at Bangalore, and inquiries were held at the Dharwar Asylum. At Madras the Commission were occupied from the 22nd to 25th September, after which they broke up into two parties—one proceeding to consult with His Excellency the Governor at Ootacamund, and the other to Hyderabad, where important arrangements had to be made for collecting information from that State. Inquiries were also held at the Madras and Hyderabad Asylums.

The two parties rejoined at Bombay on the 30th September, and then proceeded to Simla, where the head-quarters of the Punjab Government were located. On the journey one part of the Commission stopped at Baroda and Mount Abu to arrange for the collection of information in Baroda and the Rajputana States, while another party held inquiries at the asylums at Colaba, Ahmedabad, and Delhi. At Simla the Commission had their head-quarters from 7th to 24th October, during which interval two members paid flying visits to Lahore, Hyderabad (Sind), and Karachi to inspect the asylums at the two former places and to complete the arrangements made in Sind for the proper selection of witnesses.

The second tour, which was mainly devoted to the examination of witnesses, lasted from 25th October to 25th April. The various provinces were visited in the following order, and witnesses were examined at the centres named on the dates mentioned against each :—

Province.	Centre.	Dates on which witnesses were examined.
Central Provinces ...	Khandwa ...	27th October.
	Nagpur ...	30th and 31st October and 2nd November.
	Raipur ...	4th and 6th November.
	Jubbulpore ...	9th, 10th, 11th, and 13th November.
North-Western Provinces and Oudh.	Meerut ...	16th, 17th, 20th, and 21st November.
	Agra ...	22nd, 23rd, and 25th November.
	Lucknow ...	27th, 28th, 29th, and 30th November and 1st December.
	Allahabad ...	4th, 5th, and 6th December.

Province.	Centre.	Dates on which witnesses were examined.
Bombay	Bombay ...	9th, 11th, 12th, and 13th December.
	Poona ...	14th, 15th, and 16th December.
	Bombay ...	18th, 19th, and 20th December.
	Ratnagiri ...	22nd December.
Madras	Calicut ...	28th and 29th December.
	Trichinopoly ...	1st January.
	Madura ...	2nd January.
	Vizagapatam ...	9th, 10th, 11th, and 12th January.
	Madras ...	17th, 18th, 19th, 20th, and 22nd January.
Burma	Mandalay ...	30th and 31st January.
	Rangoon ...	6th, 7th, 8th, and 9th February.
Bengal	Dacca ...	19th and 20th February.
	Calcutta ...	22nd and 23rd February.
	Cuttack ...	26th and 27th February.
	Puri ...	1st March.
Assam	Dhubri ...	9th and 10th March.
	Gauhati ...	12th March.
	Tezpur ...	14th, 15th, and 16th March.
Bengal	Bhagalpur ...	21st, 22nd, 23rd, and 24th March.
	Berhampur ...	26th March.
	Calcutta ...	28th, 29th, 30th, and 31st March, and 2nd, 3rd, 4th, 5th, 6th, and 7th April.
Punjab	Lahore ...	12th, 13th, 14th, 16th, 17th, and 18th April.

Besides examining witnesses, the Commission continued to prosecute their inquiries in asylums during this tour, visiting all asylums which had not been seen during the preliminary tour. The centres chosen for the examination of witnesses were generally selected with a view to the convenience of the majority of the witnesses summoned; but other circumstances, such as the presence of a lunatic asylum or exceptional growth or use of hemp drugs, had some influence on the decision of the Commission in this matter.

14. The following statement shows the attendance of the members of the Commission during the period occupied in inquiry (3rd August 1893 to 25th April 1894):—

Attendance of Members.

Name.	Period of attendance with the Commission.		Number of meetings for examination of witnesses attended.
	(a) During the first tour.	(b) During the second tour.	
President ...	83 days ...	183 days ...	86
Mr. Ommanney ...	Ditto ...	Ditto ...	85
Mr. Fraser ...	Ditto ...	Ditto ...	85
Dr. Warden ...	Ditto ...	Ditto ...	86
Raja Soshi Sikhareswar Roy.	From 3rd August to 15th September, 44 days.	From 30th October to 24th January, from 14th to 16th February, from 22nd to 24th February, and from 7th to 25th March, 112 days.	44
Kanwar Harnam Singh ...	83 days ...	From 13th November to 5th January, 22nd February to 2nd April, and from 12th to 25th April, 78 days.	48
Lala Nihal Chand ...	3rd August to 20th September, 49 days.	From 30th October to 18th November and from 17th to 25th April, 29 days.	5

The attendance of Raja Soshi Sikhareswar Roy was broken by occasional absence caused by ill-health and other reasons. The absence of Kanwar Harnam Singh during two short periods was due to ill-health. The prolonged absence of Lala Nihal Chand was due to the fact that he suffered from continued ill-health, and was able to be with the Commission only at Calcutta at the first; then for some part of their preliminary tour, and at a few meetings for the examination of witnesses during the second tour. All the members were present at Simla during the preparation of the report.

15. The witnesses, whose evidence has been received by the Commission may be practically divided into three classes:—

The witnesses.

(1) Official witnesses able to give information regarding hemp drugs, based on their official and local experience.

(2) Non-official witnesses of all ranks able to give information regarding the drugs generally or in connection with certain classes of the people.

(3) Other persons or associations having facts or holding opinions which they desired to communicate to the Commission.

The particular selection of individual witnesses of the first and second classes was in the first place left to Local Governments and Administrations acting upon the principles laid down by the Commission that the evidence should be of as

representative a nature as possible, and that all classes interested should be adequately represented. But, as has already been explained, the action of the Local Governments and Administrations was in almost all cases supplemented by the Commission, who held themselves free to invite the evidence of persons or associations whose acquaintance with the subject was brought to their notice, or who seemed on any ground to be able to throw any light on the subject.

Witnesses of the third class were of course not selected, but were invited in the most public way, as has been already explained, to come forward and lay their views before the Commission, should they desire to do so.

The following table shows the number of witnesses in each province whose evidence was received by the Commission :—

Witnesses in British Provinces whose evidence was received by the Commission.

Province.	OFFICIAL.				NON-OFFICIAL.								Total.
	Civil Officers.		Medical Officers.		Private Medical Practitioners.								
	Superior.	Subordinate.	Superior.	Subordinate.	Practising after European methods.	Practising after Native methods.	Zamindars and Planters, etc.	Professional men.	Missionaries.	Associations.	Persons engaged in trade.	Others.	
Bengal	44	55	21	11	12	15	40	22	5	9	6	11	251
Assam	17	1	6	5	2	...	6	5	1	3	1	1	48
N.-W. P. and Oudh ...	44	29	21	25	6	52	45	6	1	1	17	17	264
Punjab	18	13	6	8	2	7	12	2	4	6	10	7	95
Central Provinces ...	16	18	6	3	...	1	21	4	3	...	12	...	84
Madras	42	36	17	20	1	6	13	9	17	2	15	15	193
Bombay	30	32	13	14	7	4	2	4	1	2	5	4	118
Sind	4	10	3	6	1	...	2	1	1	1	6	...	35
Berar	6	11	9	2	2	...	1	2	...	...	3	...	36
Ajmere-Merwara ...	1	1	1	1	1	2	...	...	...	...	...	...	7
Coorg	...	...	...	...	...	...	2	...	...	...	...	...	2
Baluchistan... ...	1	2	...	4	...	...	...	...	...	...	...	...	7
Burma	34	2	9	3	...	...	...	...	1		...	4	53
Total ...	257	210	112	102	34	87	144	55	34	24	75	59	1,193

This list comprises all the persons and associations in British provinces whose evidence came before the Commission, whether they were examined orally or not, and whether they were specially summoned or invited to give evidence or volunteered their evidence. A nominal list of the witnesses in each province

prefaces the volumes of evidence appended to the report. The evidence of all these witnesses is contained in the appendices.

The number of persons or associations who submitted written statements of their views in response to the Commission's invitation was extremely limited. In most cases their names appeared in the list of witnesses selected by Local Governments and Administrations, and they submitted detailed answers to the Commission's questions in which their views were fully set forth. In their cases the preliminary written statements, which were not intended to be treated as evidence, but were meant, as it were, to serve as an introduction to the Commission, have not been published, and only the written answers to the questions and the oral examination (if any) has been published. These will be found incorporated in the appendices containing the evidence. In the few cases in which answers to the questions were not furnished, the statements themselves have been treated as evidence, and have been published with the oral examination when such was made.

The evidence: Method of treatment of—

16. The Commission have given a liberal interpretation to the term "evidence," and have not required that the persons giving evidence should of necessity actually appear before them. To facilitate the collection of information, a series of 70 questions framed by the Commission was placed in the hands of the witnesses, or of the majority of them, and the written answers to these questions form the bulk of the evidence before the Commission. Also, as explained above, written statements, whether following the general line of the questions or not, which were from time to time submitted by persons or by associations who either did not care to answer the questions in detail or had no opportunity of doing so, have been accepted and treated as evidence.

In admitting to the record these answers to questions and written statements, the Commission have not held it necessary that the writers should come before them. The system followed was to summon, or request the attendance of, only those persons whom, after a perusal of their written papers, the Commission thought it desirable to examine orally. The papers of those whom it was not considered necessary to examine orally were at once admitted to the record. In summoning certain witnesses the Commission were generally influenced by the fact that their papers contained statements as to facts or expressed opinions which would be further elucidated if the witness had an opportunity of explaining them verbally before the Commission. It was not considered necessary to summon every witness whose evidence seemed to require to be tested or elucidated by oral examination : where several witnesses gave evidence of precisely the same character, it was deemed sufficient to select only some as representatives to be summoned. It was obviously impossible within reasonable time to cross-examine all witnesses. Other witnesses were summoned, not because their papers expressed any views which themselves required sifting, but because the Commission had reason to believe that these witnesses might, either from their position or from any other cause, be able to give further information than that contained in their papers. In orally examining the witnesses, the Commission did not take them through the whole range of their inquiries. The oral examination was almost entirely confined to those points in the written paper which required further elucidation, or to the subjects on which

the Commission thought the witness could give further information than that contained in his paper. In every case, however, the witness was permitted, if he chose to do so, to supplement his written paper by offering any further evidence relevant to the inquiry not already given by him. When a witness was orally examined, his evidence was taken down by a member of the Commission. It was not recorded in the form of question and answer, as this would have involved loss of time, but in the form of a narrative as nearly as might be in the words used by the witness. When the evidence was completed, it was read over to him, and (after any necessary correction) was admitted by him to be correct. This evidence, as thus accepted by the witness in each case, is published immediately beneath his written evidence, to which it is supplementary, and in connection with which it requires to be considered.

In almost every province some witnesses were examined orally who had not previously submitted written papers. These were either persons who, although they had not answered the questions, appeared to the Commission to be in a position to afford information, and were invited by the Commission when they arrived in the province to appear before them, or they were persons who volunteered to give evidence while the Commission were actually holding their sittings in the province.

In the case of officials who were summoned to appear, but who were unable to do so, and of non-official witnesses who were invited to appear, but failed to do so, the Commission have not excluded their papers from the record. Their written papers are published, but a note is added to the effect that they did not appear before the Commission for oral examination although summoned or invited to attend, as the case may be.

In the lists of witnesses prefacing the volumes of evidence appended to this report distinguishing marks are given to indicate those who were examined orally in addition to furnishing written papers, those who gave oral evidence only, and those who failed to attend although summoned or invited to appear.

CHAPTER II.

IMPORTANT POINTS CONNECTED WITH THE NATURAL HISTORY OF THE HEMP PLANT (CANNABIS SATIVA).

Limitation of discussion.

17. The subject with which the Commission have to deal is surrounded in many of its aspects with a mist of uncertainty and conjecture. It is the business of the Commission to remove these doubts as far as possible, and for this end it is incumbent on them to proceed on a basis of ascertained fact and established opinion as regards each branch of the subject. This principle must be applied to the natural history of the plant equally with the other matters on which they have to report.

Points for discussion.

18. In regard to the identification and idiosyncracies of the hemp plant, those points only will be noticed which have a direct bearing on the control of the narcotic in its various forms. These points appear to be—

(*a*) Whether the plant is indigenous to the British Indian possessions.

(*b*) Whether the narcotic-yielding plant is identical with the fibre-yielding plant.

(*c*) Whether, though systematically identical in the botanical sense, there exist in India distinct races yielding fibre and the different forms of the narcotic.

(*d*) Whether the fibre-yielding plant does as a matter of fact yield the narcotic in any form.

(*e*) Whether the narcotic-yielding plant does as a matter of fact yield fibre.

Points (*d*) and (*e*) are of course subsidiary to, and illustrative of, point (*c*).

Is the hemp plant indigenous to India?

19. Point (*a*) may be of importance in connection with the question of controlling the wild or spontaneous growth. In his "Report on the cultivation and use of ganja" which was issued when the Commission began their inquiries, Dr. Prain has discussed this question fully at pages 39 to 44. He is clearly of opinion that the hemp plant is not indigenous to India, but that "having reached India as a fibre-yielding species, the plant developed the narcotic property for which it is now chiefly celebrated there." Dr. Watt in his article on "Hemp or *Cannabis sativa*" is not quite so decided as the above authority in excluding the whole of India from the area of indigenous growth. He writes as follows: "It has been found wild to the south of the Caspian Sea, in Siberia, and in the desert of Kirghiz. It is also referred to as wild in Central and Southern Russia and to the south of the Caucasus. The plant has been known since the sixth century B.C. in China, and is possibly indigenous on the lower mountain tracts. Bossier mentions it as almost wild in Persia, and it appears to be quite wild on the Western Himalayas and Kashmir, and it is acclimatised on the plains of India generally. Indeed, the intimate relation of its various Asiatic names to the Sanskrit *bhánga* would seem to fix the ancestral home of the plant somewhere in Central Asia. On the

other hand, the Latin and Greek *Cannabis* is apparently derived from the Arabic *kinnab*. De Candolle says that 'the species has been found wild beyond a doubt to the south of the Caspian Sea, in Siberia, near the Irtysch in the deserts of the Kirghiz, beyond lake Baikal, and in Dahuria.' He is doubtful of its being a native of Southern and Central Russia, but suspects that its area may have extended into China, and is not sure about the plant being indigenous to Persia." The only part of India included by Dr. Watt and his authorities in the area of indigenous growth is therefore the Western Himalayas and Kashmir, and that only in doubtful language. Dr. King, Director, Botanic Survey of India, has no hesitation in pronouncing the so-called wild growth of India to be an escape from cultivation; and when it is remembered that Kashmir is on the main line of trade between Central Asia and Hindustan, the wild growth in that country and its neighbourhood may fairly be attributed to accidental importation by the hand of man from the recognized habitat, if not to escape from cultivation carried on at one time or other in the country itself. The evidence of botanists, therefore, may be taken to exclude India from the area of indigenous growth, and it will be seen that the direct inquiries of the Commission tend to confirm this view.

Is the fibre plant identical with the narcotic plant?

20. The specific identity of the fibre-yielding and narcotic-yielding plants, point (*b*), and the points which follow, are important as involving the possibility that the restriction of the production of the narcotic by limiting the cultivation may affect a product and an industry which are above suspicion. On the question of identity there is now no difference of scientific opinion. The researches of Dr. Watt are thus summarized: "*Cannabis indica* has been reduced to *Cannabis sativa*, the Indian plant being viewed as but an Asiatic condition of that species......The reduction became the more necessary when it was fully understood that, according to climate and soil, the Indian plant varied in as marked a degree as it differed from the European..............With *Cannabis indica* differing in so marked a degree according to the climate, soil, and mode of cultivation, it was rightly concluded that its separation from the hemp plant of Europe could not be maintained"; and he compares the hemp plant to the potato, the tobacco, and the poppy, all of which "seem to have the power of growing with equal luxuriance under almost any climatic condition, changing or modifying some important function as if to adapt themselves to the altered cir umstances." Dr. Prain, after personal examination of the plant, has recorded his opinion in the following words: "There are no botanical characters to separate the Indian plant from *Cannabis sativa*, and they do not differ as regards the structure of stem, leaves, flowers, or fruit.................Hemp, therefore, as a fibre-yielding plant in no way differs from hemp as a narcotic-producing one." These are the most recent scientific views, and coming from Indian botanists they carry special authority. It may be noted that Dr. W. C. Mackenzie, in an article on *Hashish* in the "Chemist and Druggist" of 9th July 1893, mentions certain differences between the seeds of *Cannabis indica* and those of common hemp. In using the name *Cannabis indica*, and pointing out this difference, is indicated a belief that the two plants are distinct varieties.

Description of the hemp plant.

21. At pages 38-39 of his report Dr. Prain has described the hemp plant. There are only two points on which the Commission from their own observations and inquiries feel

justified in correcting that description. Dr. Prain has omitted to notice the fact that the plant varies in the colour of its stem. The dark variety may be, and probably is, an accidental difference merely. But it will be found that the replies to the Commission's questions from Nepal and the memorandum from the Special Assistant Excise Commissioner in Mysore, Mr. McDonnell (para. III*a*), lay stress on the difference, and attribute to the darker variety stronger narcotic properties. The fact is also noticed by witnesses in different parts of India, and the Commission have themselves observed the variety of colour in the plants. And, secondly, in describing the male plant, Dr. Prain writes that there is no trace of even a rudimentary female flower. The Commission found at Khandwa hemp plants having the general appearance of males, but containing a few female flowers or seeds. These were quite distinct from the female plants with abnormal male flowers, which were also present in the Khandwa cultivation, and which are mentioned in Dr. Prain's description. The cultivators of Khandwa appeared also to recognize at least one variety of the pure male plant to which they gave a name of its own (*Sheoria*); but it has not been possible to detect any essential difference between it and the ordinary male plant, though specimens were forwarded to Dr. King. On this subject reference is invited to the description of the cultivation in the Central Provinces and Bombay.

Existence of races of the hemp plant yielding the different products.

22. The third point (*c*) is raised in Dr. Watt's letter (Vol. III Appendices). The function of the Commission is to test by the information they have collected the views therein expressed regarding the probable existence of races capable of yielding as a speciality the different products—fibre, ganja, charas, and bhang. The only differences recognized in the plant by the people are between the *wild* and the *cultivated* plant, the *male* and the *female*, and the *varieties* of the male and female plant already referred to. The inherent potentiality of the seed to develop a plant closely resembling the parents must be admitted, but there is no evidence of racial speciality or differentiation of the decided sort suggested by the examples quoted by Dr. Watt.

Does the fibre plant yield narcotics?

23. The question is capable of being handled more definitely in the forms in which points (*d*) and (*e*) are stated. First, it has to be seen whether the plant cultivated for fibre yields the narcotic. The evidence on this point is positive and unmistakable. The female plant cultivated for fibre in Kumaon yields a very considerable amount of charas, and its flower heads, after being handled to collect the charas, can be, and sometimes are, smoked as ganja. The fact that it is the female plant which yields the drug seems to be very strong evidence that the functional process by which the narcotic is secreted in the fibre plant is the same as that by which ganja is produced in the plant cultivated for that product. There is also a considerable body of evidence that the wild plant not only yields the narcotic as held in its leaves, but is also capable of yielding, and does yield to treatment during growth and manipulation on maturity, the products charas and ganja.

Does the narcotic plant yield fibre?

24. There is no evidence that the hemp plant is cultivated for fibre anywhere except at a considerable elevation on the Himalayas; and as regards point (*e*), Sind appears to be the only place where the plant cultivated for the narcotic yields fibre. There the object of the cultivation is bhang, and the extraction of the fibre

is described as a process so difficult and laborious that very little of it is prepared. It may be noted that selected flower heads from the bhang cultivation of Sind are used as ganja (*ghundi*), though it is of inferior quality. The production of charas is not mentioned; but from the account of the cultivation for ganja in Bombay and Gwalior, it would appear that the production of that form of the drug (charas) depends on the quantity of resin secreted in the flower head and the economy of extracting it rather than on any quality inherent in the resin.

Dr. Watt's impression that *Cannabis* is cultivated for hemp in the Godavari districts seems to arise out of the confusion which has always existed in Madras reports on the subject of the hemp drugs, and from which the subject is not yet quite clear in that Presidency. Other fibre plants, such as *Crotalaria juncea* and *Hibiscus cannabinus*, whose products go under the name of hemp, have been confounded with the true hemp. It is now definitely stated in paragraph 7 of the letter from the Board of Revenue, Madras, to the Commission, No. 1839, dated 1st May 1894, on the authority of the Deputy Director, Agricultural Branch of the Board of Revenue, that "*Cannabis sativa* is never grown in this Presidency for fibre." Attention may in this connection be drawn to pages 3 to 5 of Dr. Royle's work on the "Fibrous Plants of India." He explains the effect of the Indian method of cultivating hemp and flax, involving free exposure of the individual plants to light, heat, and air, in causing the fibre to become woody and brittle instead of flexible and strong. He contrasts the European method of cultivation by thick sowing, which, with a temperate climate inducing slow growth, conduces to height and suppleness in the plant and its fibres. He admits that the Indian climate with its comparatively short seasons, great alternations of dryness and of moisture, and considerable extremes of temperature is not the best suited to the production of good flax and hemp. But he suggests that it might be possible by modifications of culture and the selection of suitable sites to grow both these plants within the limits of India so as to yield useful fibre. In the Himalayas only are to be found climate and mode of cultivation of the hemp plant resembling those of Europe.

CHAPTER III.

THE EXISTENCE, PREVALENCE, AND CHARACTER OF THE SPONTANEOUS GROWTH.

Bengal.

The wild growth not found over the whole province.

25. The Commissioner of Excise, Bengal, says in his memorandum that "the wild plant is found in nearly every district, and it grows abundantly in several places." The evidence enables the facts to be stated more definitely; and it will be seen that over a large part of the province the spontaneous growth is not so common or abundant that it can with any propriety be called wild.

The Patna Division north of the Ganges.

26. The Terai region of Bengal appears to resemble that of the North-Western Provinces in having a luxuriant growth of hemp. Beginning from the frontier of the North-Western Provinces, the evidence leaves no doubt that the spontaneous growth is extremely common and plentiful in that part of the Patna Division which lies north of the Ganges. The only witness who raises any doubt on this point is Mr. Williams, Collector of Darbhanga; and he describes the growth as much less common than in Assam, though plentiful on the borders of Nepal. The evidence generally, however, cannot justify any exception being made of the Darbhanga district.

The Bhagalpur Division.

27. Eastward from Patna lies the Bhagalpur Division, the region from which the bhang supply of Calcutta is brought. A special inquiry was made in this tract, North Bhagalpur and Purnea, by Mr. B. C. Basu, Assistant to the Director of Land Records and Agriculture, at the request of the Commission. Mr. Basu does not seem to have explored the waste lands of the Terai; his inquiries relate solely to the populous parts of the country. He says that the growth as a rule "is confined to land in the immediate vicinity of raiyats' holdings. Such land is usually called *dihisar* in Purnea and Bhagalpur, and is naturally the richest in the village." He says further on that these lands are used as standing ground for the cattle, and that "the washings from them flow over the alleys and ditches in the village; and as there is little or no cultivation at any time of the year, every bit of bare ground which is otherwise suited is covered with a luxuriant mass of wild hemp as soon as the cold weather has set in." The Commission would have been glad to learn more about the lands at a distance from houses. The Collectors of Purnea and Bhagalpur, while confirming Mr. Basu's account, report that the growth springs up notwithstanding that the lands may have been flooded for 3 or 4 months in the rains. It is not confined to waste lands, but comes up with the crops which are sown after the inundations have subsided. It is specially abundant within the influence of the floods of the Kosi river. It is clear then that the growth about homesteads and cultivation is extremely plentiful; and, looking to the whole evidence, the probability is that towards the Terai the wild growth is found in less close association with man, and in great quantity in suitable positions and soils. The Collector of Bhagalpur reports that in the Banka Sub-division, which lies on the south of the Ganges, the growth is not so plentiful, and is found principally on homestead lands.

The Rajshahi Division.

28. In the Rajshahi Division the Terai is still credited with heavy growth, and the northern parts of the Dinajpur and Rangpur districts are specially mentioned; but elsewhere evidence as to abundance has a more uncertain sound. Babu Abhilas Chandra Mukharji

(63), 2nd Inspector of Excise, says that the wild bhang grows luxuriantly all over the division. But this sweeping statement is not generally corroborated. Witnesses do not agree that the growth is abundant, though the fact that there is no licensed sale leaves no doubt that it exists in sufficient quantity to supply the people's wants. The district of Malda, which adjoins the Rajshahi district on the north-east, and is favourably situated as regards proximity to the great bhang-producing district of Purnea, does not appear from the evidence to have much spontaneous growth. It seems probable that the exceptionally favourable conditions associated with the Himalayas and Terai cease at the point where the Ganges swings round the Sonthal highlands, and that a straight line drawn from Sakri Ghât to a point on the southern fringe of the Garo Hills would mark the limit of a less abundant growth.

The Dacca and Chittagong Divisions.

29. But there is evidence that the growth is still common south of this line and east of the Ganges and Bhagirathi, more so under the Garo Hills and along the course of the Brahmaputra than elsewhere. It is hard to realize an area of wild growth quite so large as that mentioned by Babu Abhilas Chandra Mukharji, *viz.*, twenty square miles covered with long grass and hemp plants. Mr. Luttman-Johnson, talking of this very tract, Durgapur thana, says he saw the plant growing more or less thickly over twenty or thirty acres. Babu Abhilas Chandra Mukharji mentions many other places in Dacca and Mymensingh where the plant grows abundantly, and the Collector of Dacca corroborates his evidence regarding the south-west corner of that district. It is evident that in these districts the growth is very prevalent. Sarat Chandra Das (47) says that the growth is dense in places in the Chittagong Division, but he cannot say that it is abundant in any district.

The central part of Lower Bengal.

30. In the whole tract lying between the Brahmaputra and the Bhagirathi rivers, and bounded on the north by the imaginary line from the Ganges to the Garo Hills, the evidence as to the abundance of the growth is discrepant. The growth is probably most common on the banks of the Ganges and Brahmaputra.

South-Western Bengal bounded by the Ganges and Bhagirathi.

31. In the Patna and Bhagalpur Divisions south of the Ganges, and in the Burdwan, Orissa, and Chota Nagpur Divisions, the spontaneous growth is evidently very scanty. The plant is only found where its existence can be accounted for. In this respect the area resembles the southern fringe of the North-Western Provinces.

The Tributary States of Orissa.

32. The Tributary States of Chota Nagpur and Orissa are included in this description. Regarding the Garhjat, Mr. Worsley, Commissioner, reported in 1889: "I think it is very doubtful if ganja grows wild to any extent in the Tributary Mahals." And again Mr. Hopkins, Officiating Commissioner of Orissa, wrote in April of the same year: "The prevailing impression that ganja grows wild in the Tributary Mahals appears to me to be wrong." It is true that the Board of Revenue and the Government of Bengal declined to accept this opinion, but it is confirmed by the information gathered by the Commission. The Officiating Superintendent, Tributary Mahals, says indeed in his report that hemp grows in all parts of the Tributary States, but in his oral evidence he says he feels sure that the plant does not exist except in the enclosures of houses.

33. Regarding the Chota Nagpur States, the evidence of the Commissioner, Mr. Grimley, does not describe any but a very occasional and sparse growth in certain places, and even this is not corroborated by any local witness. There will be found on the contrary distinct statements that the wild plant does not exist. The reports from the Seraikela and Kharsawan States in the Chota Nagpur Agency do not mention the existence of the wild growth.

The Political States of Chota Nagpur.

34. The memorandum of the Kuch Behar State reports that wild hemp grows spontaneously in most parts of the State. The State lies within the belt of Sub-Himalayan growth.

Kuch Behar.

35. The report from Hill Tippera makes no mention of the wild growth. It states at the same time that there is no cultivation of the plant. This is incorrect, for there is evidence of some cultivation as well as smuggling from the State, and the wild hemp is frequently referred to in connection with it. The evidence of smuggling comes from Assam as well as Bengal. It is probable that the wild growth is not very extensive, and the information is not sufficient to warrant a decided opinion as to whether the plant sows itself or merely springs from chance seeds dropped near the homesteads.

Hill Tippera.

36. The hemp plant grows spontaneously and in considerable quantity in all parts of Assam, including the Brahmaputra and Surma Valleys and the Hill Tracts. One witness states that the wild plant used to grow in Assam before the ganja shops were established, and this would appear to be the fact, because the plant is cultivated on the Himalayan slopes overhanging the Brahmaputra Valley; it is found growing without cultivation in the hill ranges, and in the Naga Hills it is looked upon as a jungle product.

Assam.

The wild growth existed before ganja shops were established.

37. The Excise Commissioner, Mr. Driberg, has served in the province for thirty years. In his written answers he passes in order over all the hill ranges within and surrounding the province, and concludes by saying that they are all ganja-producing tracts. And referring more particularly to the plain country, he says: "The hemp plant grows with equal abundance in all the districts of the province, and in the semi-independent hills beyond the frontier. It is never seen in forests or other lands remote from villages, but always near villages or on abandoned village sites .... In the interior, remote from tea gardens and the settlements of foreigners, it is not found. So in regard to fields, it is found chiefly where there are foreigners." On the other hand, Dr. Macnamara (20) states that he has found the plant in Assamese villages far away from places where there are foreigners; but it would be difficult to get a place in Assam very far from the gardens. Mr. McCabe, Deputy Commissioner of Kamrup, being questioned about efforts that may have been made to control this spontaneous growth, says that no attempt has been made to exterminate the plant in the hills or in unoccupied lands, but any officer seeing a plant in occupied land is bound to cause it to be uprooted and to prosecute—presumably if there is any appearance of the plant having been cultivated,—and that there is now practically no growth in occupied lands. He is of course speaking of his own district. He says further that the quantity of growth

The wild growth in the valleys.

in waste lands is very small and has a tendency to decrease with the spread of occupation, and that active measures of extermination are not necessary. In face of other evidence, it is questionable if this can be accepted as a correct picture of the state of the spontaneous growth in the plains. It is certain that the weedy growth in yards and enclosed ground as well as in the waste places connected with habitations, present or past, is extremely common even in Kamrup. Mr. Gait, Director of Land Records and Agriculture, after appearing before the Commission, has sent notes with reference to Mr. McCabe's statements, in which he writes that he found the plant growing luxuriantly round the Kamalpur rest-house and within a mile of the one at Tambulpur, which were two of the four camps he stayed at since he entered the district; and he was beginning to think that, if properly looked for, it would be found in almost every village in Kamrup. From the fact that he always found it close to *basti* land, he was inclined to think that, if it was not actually planted, it was very actively tolerated. Dr. Mullane also says that "in the Kamrup district the hemp plant springs up spontaneously in almost every patch of cultivated ground." Without accepting Mr. Gait's opinion that the growth is fostered by the villagers, the Commission think from the body of the evidence that his description of the prevalence of the growth in Kamrup is not far from the truth, and that with but slight modification it will apply to every plain district of Assam. Regarding the Surma Valley, confirmation of this view is found in the evidence of Mr. Luttman-Johnson (Bengal, 6), an officer of long experience in Assam.

The wild growth in the hills.

38. Neither is there any reason to doubt that the plant grows without cultivation in the hill tracts within and bordering on the province. It is cultivated in the Bhutan Hills, and cannot but run wild there, as it does in other places which are thoroughly congenial. Mr. Driberg speaks of not only the Himalayas, but all the hill ranges within and bordering Assam, as ganja-producing tracts, and it is highly probable that the plant has to a greater or less extent run wild in all of them. Mr. Luttman-Johnson knows it grows wild in the Naga Hills and Bhutan, but thinks it must be from seed accidentally sown. He has seen it wild in the Khasi Hills and in the Mymensingh jungles, presumably at the foot of the Garo Hills. Mr. Godfrey (1) believes it grows wild in the Khasi Hills. Mr. McCabe (5) has seen it wild in the lower ranges of the Naga Hills. It may be doubted if the smuggling which is carried on from the hills in all parts of the province to the plains can be of the *wild* ganja as stated in the Excise Commissioner's memorandum, for the produce of the wild plant is of very inferior quality, and it can be got in the plains. The smuggled plant must have been to some extent cultivated, but its existence in the hills is a decided corroboration of the evidence that the wild plant is found there also.

The spontaneous growth must be regarded as wild.

39. It is difficult then to avoid the conclusion that Assam, including both the Brahmaputra and Surma Valleys, with the hill ranges which form part of the province, ought to be classed with the Himalayas and the Terai as a region in which the spontaneous growth has run wild.

Manipur.

40. There is only one Manipur witness, and he says nothing about the spontaneous growth. Mr. Driberg classes the State as a ganja-producing tract, whence the drug is surreptitiously brought down to the plains. No other witness gives direct evidence

about Manipur; but the prevalence of the spontaneous growth in the hills bordering the State on the Assam side, which is taken to be proved, justifies the inference that the growth must also be common in the State itself.

41. The Government of the North-Western Provinces caused enquiry to be made about the growth of bhang in the year 1883. The Excise Commissioner then reported as follows: "The hemp plant grows wild, and is made into bhang in the fourteen districts marginally* noted. The hemp plant is cultivated, and the cultivated hemp is made into bhang in the three districts marginally† noted."

North-Western Provinces.

The official account of the wild growth.

*1. Dera Dun. 2. Saharanpur. 3. Muzaffarnagar. 4. Bijnor. 5. Budaon. 6. Moradabad. 7. Bareilly. 8. Pilibhit. 9. Gorakhpur. 10. Terai. 11. Naini Tal (Kumaon). 12. Kheri. 13. Bahraich. 14. Gonda.

† Farakhabad, Garhwal, and Hardoi.

In the memorandum furnished to the Commission by the present Excise Commissioner, Mr. Stoker, the districts of Muzaffarnagar and Budaon are omitted from the list of districts in which the wild growth is found, and Basti and Garhwal take their place. It is stated, however, that the produce is considerable in Muzaffarnagar, Shahjahanpur, and Meerut. In connection with the cultivation in Hardoi and Fatehgarh, the Excise Commissioner remarks: "It is supplemented to some extent by self-grown plants produced about wells or houses and on small waste patches and head lands." Mr. Stoker then refers to the accidental growth in other parts of the province in these words: "Beyond these districts the hemp plant flourishes widely, though it is not produced in sufficient quantities to render it of any commercial importance. I would not venture to assert that it is always of purely indigenous growth, though its wide diffusion leads me to believe that this is the case. It may be seen growing about wells and temples; and in such places it is, no doubt, the produce of seeds scattered by travellers and fakirs who use hemp drugs. It is also found in and about houses and in gardens, where it is either introduced in the same way or deliberately sown. In all these cases I think the plants, if not the result of cultivation, are knowingly permitted to grow, and are subsequently used by the people who live in those places. The plant may also be seen springing up in a scattered way in waste places and low lands." It has been shown in the previous chapter that there is no *purely indigenous growth* of hemp, and that this description cannot be correctly applied either to the plant in the area of wild growth or to that in the tracts with which Mr. Stoker is dealing when he uses the expression. But the distinction must not be lost sight of between the area in which the plant is so prevalent as to deserve the character of *wild* and the reputation of propagating itself, and that in which it is more scantily distributed and springs from seed sown accidentally by man. The former area comprises the Himalayan regions and the districts lying immediately below the mountains. The following observations of Mr. Stoker include the latter area: "In some districts the amount produced by these forms of sporadic growth is considerable, and the constant source of complaint by the drug contractors who have the monopoly of the vend. These conditions obtain, broadly speaking, to a greater or less extent in all parts of the province lying north and east of the Jumna."

The Excise Commissioner then describes an area of very scanty spontaneous growth: "In Bundelkhand and most of Mirzapur—in fact, in all the country in and adjoining the hill system of Central India—the plant is much more rarely found. But that it can be grown, and with some perfection, in this tract also is shown by the occasional presence of plants and by the existence of

considerable cultivation in Gwalior and in some of the Bundelkhand Native States which interlace with British territory." Thus the belt of hilly country along the south of the province is still less favourable to the spontaneous growth than the plain north and east of the Jumna.

The evidence corroborates the official account.

1. Bulandshahr.	9. Fatehpur.
2. Mathra.	10. Hamirpur.
3. Agra.	11. Allahabad.
4. Mainpuri.	12. Jhansi.
5. Etawa.	13. Benares.
6. Etah.	14. Azamgarh.
7. Budaon.	15. Unao.
8. Cawnpore.	16. Rai Bareli.

42. The evidence tendered to the Commission confirms this description generally; but it may be noted that not a single witness speaks to spontaneous growth in the districts named in the margin, all of which, except Jhansi and Hamirpur, lie north and east of the Jumna. This absence of mention does not prove that the spontaneous growth does not exist, but it justifies the conclusion that in the central belt it is certainly not such as to deserve the character of *wild*, and that Mr. Stoker's description gives it as much of that character as it deserves. This central belt is approximately bounded on the north by a line drawn through Muzaffarnagar, Moradabad, Bareilly, Shahjahanpur, and Sitapur to Bahramghat on the Gogra, and thence following the course of that river. Throughout the country lying beyond this line, including the mountains, the spontaneous growth is abundant. It is bounded on the south and south-west by the Jumna river, beyond which the spontaneous growth is rare.

Garhwal Tehri.

43. The State of Garhwal Tehri comprises the Himalayan region west from British Garhwal, and there is no reason to suppose that its circumstances as regards the spontaneous growth of the hemp plant differ in any way from the latter district. The Diwan of Tehri gives 2,500 to 4,000 feet as the elevation at which the plant flourishes. Other evidence shows that it grows freely beyond these limits.

Rampur.

44. The Rampur State stretches south from below the Terai district. The Revenue Member of the Council of Agency writes that the spontaneous growth is found in the north and north-eastern part of the State. There is nothing to differentiate Rampur from the British districts lying east and west of it in respect to this growth.

Punjab.

Wild growth in the Himalayas and Terai.

45. The hemp plant grows spontaneously throughout the Himalayas, and in a broad belt along the foot of the mountains. The growth is so free and vigorous that it may without impropriety be called *wild*, and it does not appear to differ in extent and character from that of the similar region in the North-Western Provinces. Its prevalence seems to be most notorious in the districts of Hoshiarpur, Gurdaspur, and Jullundur, because the bhang contractors draw their supplies from these districts; but witnesses, many of them of high authority, such as the Commissioner of Rawalpindi, speak to its existence in greater or less profusion throughout the submontane districts from Peshawar to Umballa. Contradiction may occasionally be found regarding the density and abundance of the growth, but about its frequent occurrence in this stretch of country there can be no doubt. It has been seen that in other provinces it is the habit of the plant, when it finds itself established in a suitable home like the Terai, to grow very densely and in patches of considerable size, and the Commission are inclined to accept the evidence of those whose statements are in agreement with this knowledge.

The limits of the submontane belt of wild growth.

46. The growth decreases in frequency very rapidly as the Himalayas are left behind. It appears, however, from the evidence to maintain its hold in the Amritsar, Lahore, Karnal, and Shahpur districts further south than in others. As regards three of these districts, special reasons for this persistence may be suggested. Shahpur is watered by the Jhelum, which appears to carry an exceptionally heavy growth on the banks of its upper reaches. Amritsar is not only the great market for bhang as well as charas, but it is the head-quarters of the Sikh religion, and the former drug is largely consumed by the followers of that faith. It seems to be a regular drink or refreshment with the visitors to the Golden Temple. When members of the Commission visited the city, a dense growth of bhang flourished over a large area in the outlying parts of the public gardens and countless plants in the hedgerows surrounding the city. The seeds discarded from the large quantity of bhang that is daily consumed in the city sufficiently account for this growth, and it is probable that the ways leading to Amritsar from the country round are sown with hemp in the same way. The plant is probably propagated in the same manner, but to a less degree, around Lahore, the capital town of the province, and the head-quarters of the Administration. East of Umballa and Karnal the bhang-bearing belt appears to widen out, and its southern boundary would probably pass across the Karnal district.

The supposed wild hemp of the Suleiman Range.

47. The Excise Commissioner reports that "the supply of bhang is derived from the wild hemp plant which grows within the province in the submontane tracts under the Himalayas and the Suleiman Range." The evidence, it has been seen, corroborates the statement as regards the Himalayan tract. But it does not do so for the Suleiman region. The existence of the wild growth is not mentioned in Kohat or the Derajat Division. Witnesses (60) and (19) make statements which need explanation. The former says, speaking of the Dera Ghazi Khan district: "In the hill tracts of my *ilaka* the wild hemp grows here and there to a small extent, but no one consumes it. Sometimes budmashes, however, administer it from evil motives to another person without his knowledge." And again—"The wild hemp is known in this country by the name of '*kohi* bhang,' and cultivated hemp is called bhang only." The statement itself is open to doubt for two reasons: it is unlikely that the true hemp, though growing wild, should not be consumed, and the uses to which the *kohi* bhang is alleged to be put point to a much more potent drug. The explanation will be found in the answer of Mr. Dames (9), whose experience has been gained especially in the Derajat. He writes: "There is a plant known as *kohi* bhang found along the beds of torrents in the Suleiman Hills, the leaves of which are said to possess strongly intoxicating properties. This plant is certainly not a *Cannabis*, but I am unable to state what its genus is. It looks like a *solanaceous* plant. Its growth is scattered, and it is not found in great abundance anywhere." There can be no doubt that this is the plant to which witness (60) refers. It is in all probability the same as the *akoe* of Sind, which is proved to be *Hyoscyamus muticus* of the *solanaceous* order. The same plant is referred to by witness (36) in his oral evidence as *kuyi*, growing in a valley 50 miles west of Dera Ismail Khan. Witness (19) is not a very exact observer, and when questioned in detail about his knowledge of the wild plant travels away to the Umballa district. Witness (24), an Excise officer, mentions the *kooi* (*i. e.*, *kohi*), doubtless the same *Hyoscyamus*, as being imported from Kabul and Kandahar.

The same witness gives the name of another hemp plant as *badal*, saying that it is known to grow in the Waziri Hills about 50 miles to the west of Dera Ismail Khan. He describes its leaf as being as broad as that of the *madar*, which shews that this also is not the true hemp.

Spontaneous growth in the plain country.

48. Witness (41) mentions the wild plant as growing scantily on the banks of canals and in waste places in the Delhi district, and its occurrence in one tahsil of the Firozpur district is stated by another witness. These statements may very well be correct, but they do not imply a growth which can properly be called wild in the sense in which the word is now being used, but only a casual and accidental growth. One or two witnesses talk in a general way about spontaneous growth in all districts.

Area of wild growth defined.

49. It will be a safe conclusion to say that the wild growth is only to be found in the Himalayas and in a belt of country under those mountains which is very narrow at Peshawar, and gradually widens as it approaches the North-Western Provinces. Self-sown hemp plants may be found elsewhere, but there is no tendency for them to run wild outside the above tract.

Punjab States.

50. The wild growth occurs in the Himalayan States, and those of which any part lies within the Sub-Himalayan bhang-bearing belt. No State shows any peculiarity in the capacity for growing wild hemp. The Hill States are numerous, and need not be named. Kapurthala and Patiala are the only States in the plain country from which the spontaneous growth is reported, and it will doubtless be found in those parts of the States which fall within the Punjab tract of wild growth. Patiala has a considerable area of territory in the Himalayas, where the wild growth will be found to exist. The Bahawalpur witnesses say that occasional plants are found in graveyards—a not unlikely locality for such growth when there is sufficient rainfall—as there are generally *takias* in connection with them to which fakirs resort.

Central Provinces.

The wild growth does not exist.

51. There are only two witnesses in the Central Provinces who depose to having seen the hemp plant in spontaneous growth. One is Mr. Lowrie, Deputy Conservator of Forests, and he can only name one village. The other witness (52), Malguzar and Honorary Magistrate, saw it when ganja was allowed to be cultivated in his neighbourhood. Several witnesses make general statements, more or less of a hearsay character, that the plant springs up on heaps of village refuse from seed accidentally dropped. Mr. Drake-Brockman and many non-official and official witnesses, who ought to know, including Mr. Robertson, who has charge of the Nimar district, where ganja is cultivated and the escape from cultivation would be likely to occur, make more or less positive statements that the spontaneous growth is not to be found. The growth observed by Mr. Lowrie is the same kind of stray growth which is reported by other witnesses without having been actually seen. It was not in the jungles, and had probably sprung directly from seed thrown out of the houses. It is evident that in the Central Provinces the spontaneous growth does not occur, except very occasionally, as a weed in the neighbourhood of villages from seed accidentally dropped in suitable soil, and that there is no tendency for this spontaneous growth to reproduce itself.

Feudatory States.

52. There is no evidence that the plant grows spontaneously in the Feudatory States. The spontaneous growth, however, probably exists just as it does in the Province proper.

Madras.

No official knowledge of wild growth.

53. It seems clear that the spontaneous growth does not prevail in any part of the Madras Presidency to such an extent as to have led to the idea that the plant is wild. The Government memorandum states that nothing is known about the extent of the wild growth; and Mr. Benson, Deputy Director of Agriculture, has only seen some references to its existence in the northern district. The Commissioner of Salt, Abkari, and Separate Revenue, replying to the direct enquiry of the Commissioner of the Orissa Division on this subject in his letter No. 529-Mis., dated 11th May 1887, was unable to say whether the hemp plant grew wild. This is remarkable because the plant has always been cultivated as a regular field crop in various parts of the Presidency; the desultory cultivation in yards is common in certain localities; there are highlands in all parts of the Presidency which would apparently be suitable to its growth without cultivation; and the use of the drugs among the jungle people and the coolies of coffee and tea gardens is by no means unfrequent. The want of official knowledge of it is a fairly strong indication that the wild growth does not exist, or exists only in inconsiderable quantity.

Evidence regarding the wild growth.

54. It is only in the hill regions, such as the zamindaris of Ganjam and Vizagapatam, the Javadi Hills, the Shevaroys and other ranges in the Salem district, the Nilgiris and Wynaad, and the Palni Hills, that there is any reason to suspect spontaneous growth on at all an extensive scale. And the suspicion is not strong, for it has only been possible to elicit from one witness a description of the growth which agrees in any degree with what has been learnt about it in Northern India. This witness is Mr. William Robinson, Missionary, and his evidence must be discounted by the admission that "I am singularly deficient in the power of differentiating plants, but the smell of the hemp plant is well known to me." On the whole it is probable that the growth which this witness saw in the Shevaroy Hills was really hemp, but that he has frequently been deceived by other weeds, of which there are several, which bear a certain general resemblance to it. As to the abundance of the growth in the Shevaroys, he is to some extent corroborated by witness (189), who appears to be a practical man, and to speak from personal observation. But his observation is not recent and his statement is not in a convincing form. Other witnesses talk of the spontaneous growth as abundant in the Ganjam Hill Tracts and the South-East Wynaad, and even in the Ceded Districts; but there are equally good witnesses on the other side. The District Forest Officer of North Malabar, who appears to be of a careful and observant habit, says he has seen the spontaneous growth in the Travancore and Tinnevelly Ghâts and in the Wynaad, but it was always in the neighbourhood of cultivated plants. He says distinctly: "I have never seen the plant wild where there was no cultivated plant near." He describes the situation which appears to be suitable to the wild growth, and the growth itself as scattered. This is probably the best witness in Madras on this subject. Mr. Long (149) says that he has sometimes seen a few plants growing together which people told him had sprung up spontaneously; but

the most important of such patches of growth appeared to him to have been cultivated.

The chance growth of the Presidency is not wild.

55. The general conclusion must be that the dense and widespread growth does not exist in the Madras Presidency, but that throughout the Presidency the chance and scattered growth on refuse heaps near villages or in other exceptionally favourable situations, such as old cattle-folds or coolie lines, may occasionally be found, and more commonly in the hill tracts than in the low country.

Travancore and Cochin.

56. There is information from Travancore that "in some hilly tracts where the seed was once sown by Kanikars, hillmen, a succession of plants appears to have been kept up without fresh plantation. This, however, is not strictly wild or spontaneous growth." The District Forest Officer of North Malabar has also spoken of the spontaneous growth in the Travancore Hills. This is all the available information on the present subject regarding this State. It seems certain that such spontaneous growth as does exist is not extensive; that it is intimately associated with cultivation, past or present; and that, though it may possibly succeed in occasionally reproducing itself, there is no marked tendency for the plant to run wild.

Sondur, Banganapalle, and Pudukottai.

57. There is no information about spontaneous growth in the minor Madras States. Their conditions are not in any way different from those of the Presidency generally, and the same extent of spontaneous growth may be expected to exist.

Bombay.

There is no wild growth.

58. The spontaneous growth is found occasionally in the districts where the plant is cultivated, especially Ahmednagar. It is said by one or two witnesses to occur also in the highlands of the Southern Maratha Country. But in no place does it appear to be either dense or frequent, being represented only by scattered plants on the refuse heaps about villages. Many intelligent witnesses, who have evidently bestowed great care on their inquiries, state positively that the spontaneous or wild growth does not exist, or are silent on the subject. Mr. Dodgson and Mr. Cumine mention its occurrence in the Dangs, but only as occasional plants. This is a country of forests and hills and scattered hamlets far removed from observation, and having a copious rainfall. The same description applies to the whole of the Western Ghâts, and the plant might be expected to run riot in these regions if it were inclined to do so. The Excise memorandum reports that the spontaneous growth does not exist.

Aden.

59. The plant does not grow spontaneously in Aden according to the report of the Political Resident.

Kathiawar.

60. The plant does not grow freely from self-sown seed in any part of the Kathiawar Agency. A few plants may be found occasionally in fields or gardens or near irrigated crops. They seem to be generally more or less tended where they do exist. They are said to occur sometimes in grass preserves, but the evidence is of the weakest kind.

61. Cutch lies between Sind and Kathiawar. As there is no spontaneous growth in either of the latter provinces, it is unlikely that there should be any in Cutch. The Political Agent's report mentions none.

Cutch.

62. The report of the Chief Minister of Palanpur, the principal State in the Palanpur Superintendency, states that "wild hemp is found to a very insignificant extent in this State." There is clearly no extensive growth, that which is referred to being probably the few plants that spring from chance seed. This description may be held to apply to the whole Agency.

Palanpur.

Mahi Kantha.
Rewa Kantha.

63. No spontaneous growth is reported from the Mahi Kantha or Rewa Kantha Agency.

64. The Diwan of Kolhapur reports that "the wild plant is not grown in that State." In the smaller States of the Agency there is some cultivation, but no wild growth. There may be a rare spontaneous growth from chance seeds, but nothing more.

Kolhapur and Southern Maratha Country.

65. The only native territory in which the hemp plant is definitely stated to grow wild is the Dangs, and there only a few isolated plants. The language used by the Diwan of Cambay is ambiguous, but it at all events leaves no doubt that the spontaneous growth is quite unimportant if any exists; and the Superintendent of Police says that the wild plant is not found in the State.

Various States.

66. The spontaneous growth is not reported to occur in the valley of the Indus. Many witnesses speak of a plant called *ekoi* or *akoe* occurring in the hills on the western frontier of Sind as wild bhang. Specimens of the plant have been submitted to Dr. King of Calcutta and Mr. Woodrow of Poona, and pronounced by both to be *Hyoscyamus muticus*. It is said to be very much more potent than hemp, containing the alkaloid hyosyamine, an isomeride of atropine. Under the name of *kohi* bhang, "hill bhang," its intoxicating properties are well known to the natives, and it is stated to be smoked like ganja, and sometimes used in the same way as dhatura to facilitate robbery; and its use has occasionally been suspected in the Punjab and Baluchistan, where it is common (*Pharmacog. Indica*, Vol. II, page 631). The statements describing it as wild *hemp* are made in confident language, and often with some circumstance as to the manner in which it came to be accidentally sown in the hills. The words *ekoi* and *akoe* are probably short forms of *bhang-i-kohi*, or "bhang of the hills," which is the name used by some persons in the Punjab as well as in Sind. The Commissioner in Sind doubted the existence of the wild growth in the Baluchistan Hills as reported to him, and himself submitted specimens of *ekoi* to Mr. Woodrow with the result stated.

Sind.
The supposed wild hemp of the Baluch Hills.

67. It is doubtful if the spontaneous growth occurs anywhere in the province, because the rainfall of the Indus Valley is extremely light and the mountains on the western frontier are very arid. Even growth on the rubbish heaps near houses is unlikely on account of the want of water. It is probable that the almost total absence of rain counteracts the favourable conditions which might from the experience of Upper India be supposed to exist in the periodical floods and irrigation from the Indus.

No wild growth in the Indus Valley.

Khairpur.

68. The hemp plant does not appear to grow spontaneously in the Khairpur State.

Berar.

69. Under the regulations in force in Berar, the village officers are held responsible that all ganja of spontaneous growth is uprooted, and the cultivation of the plant is only allowed after license has been obtained. By these arrangements the spontaneous growth appears to be successfully kept under; for only one witness out of 38 can be found to say that it exists, and it may be doubted if he refers to the same plant.

Ajmere Merwara.

70. There appears from the memorandum of the Commissioner, Ajmere-Merwara, to be no spontaneous growth of any importance—"Here and there a few plants grow spontaneously." The witnesses do not speak of any such growth. Plants that spring up in this way are up-rooted or made over to the contractor. There is evidently no dense growth of a wild character.

Coorg.

71. The Commissioner of Coorg is "doubtful whether wild hemp is actually found, but hemp springs up in the coffee gardens, near coolie lines, and near the huts of the wild tribes, and no one owns to its cultivation. A coolie in weeding the coffee will try to avoid pulling up the plant unless his master happens to be looking." The evidence of two witnesses describes a growth round about huts whose spontaneous character is doubtful, for it seems to be generally tended. A few chance plants may spring up of themselves in such places as are indicated above, but there is no wild growth of the dense character known in the north of India.

Quetta Pishin.

72. No wild or spontaneous growth is reported from any part of Baluchistan. The witnesses do not know of its existence.

Burma.

Absence of wild growth remarkable.

73. Ganja was made contraband in Lower Burma in 1872-73. In that year large seizures of ganja illicitly brought from Upper Burma were made, and witness (19) states that Upper Burma was the chief source of supply in those days. This being the case, with the known tendency of the plant to run wild, the apparent suitability of Upper Burma to the growth of the plant, and the fact that the ganja-supply has by no means totally ceased notwithstanding the prohibition, it is remarkable that the evidence of the existence of the spontaneous growth should be so uncertain as to make it doubtful if it is to be found in any of the settled districts except as a very occasional weed.

Evidence regarding wild growth.

74. The Deputy Commissioner of Mergui alone mentions any extensive growth, and there are internal reasons for distrusting his statements. He no doubt made the acquaintance of the plant during his service in Kumaon, but he seems to have left that district over fifteen years ago, and his memory may not have served him. He talks unscientifically of the *indigenous* wild plant, which shows that he cannot claim to have made any study of the plant. The Burmese name he gives to the plant, "pi-san-bin," the literal translation of which is apparently "net-rope plant," is not used by any other witness. A rich alluvial loam, a climate hot and damp, and a low level are not, as far as the information given to the Commission teaches, conditions favourable to the spontaneous growth of hemp or to the development of its fibre. In his second paper he writes that the Siamese use the

cultivated variety of hemp, which suggests that he is talking of some plant in which the distinction between wild and cultivated forms is more marked than is the case with *Cannabis*. He was unable to procure specimens of the plant in June in reply to the request of the Commission reporting that the plant was not in growth at that season. Under these circumstances, this evidence must be regarded as falling far short of proof. The Commissioner of Pegu (2) had the plant pointed out to him growing outside three villages in Upper Burma among the rubbish heaps. He would not have known the plant if it had not been pointed out to him. The Commissioner of Akyab mentioned the scanty and scattered growth in his division of a plant which the Chittagonians call *boil ally*, and which he supposed to be a species of wild hemp. He has kindly sent specimens of the plant in answer to a request from the Commission, and they are found to belong to two species of *Sida*, *viz.*, *Sida spinosa, L.*, and *Sida carpinifolia, L.* These plants have no narcotic properties. The Commissioner of the Eastern Division, Upper Burma, who has been at some pains to make enquiries, and the Deputy Commissioner of Mandalay can give no information of the wild growth, though both have apparently come across cultivation of the plant. The Deputy Commissioner of Toungoo mentions the wild growth as existing, though not abundant, in Prome and Shwebo. The Inspector-General of Police in an expedition north-east of Bhamo found that his men were getting some kind of ganja from the Kachins, who gathered it in the jungles. A specimen of the ganja from these hills has been examined, and consisted merely of leaves and tops of the plant rolled into balls, and showing no signs of cultivation or preparation. A District Superintendent of Police states that in Upper Burma the plant is often seen growing near villages.

No wild growth in the settled districts, but probably exists in the northern mountain ranges

75. The evidence cannot be accepted as showing more than a casual growth in the neighbourhood of villages, which could easily be accounted for. It can neither be extensive in any particular case, nor can the cases be very numerous. Except the doubtful report from Mergui, there is no evidence of any tendency in the growth to reproduce itself and spread. These remarks apply to the settled districts only. The plant probably has run wild in the Kachin country and in the mountain ranges adjoining China, Assam, Manipur, Lushai, and Tippera.

Mysore.

76. The report of Mr. McDonnell, Special Assistant Excise Commissioner, shows that hemp sprung from chance seed is often found in all the eight districts of the Mysore State; but it does not appear to be abundant anywhere or more frequent in one district than another. The seed thrown away on dust heaps finds its way with the manure into fields and gardens. It is reported both from Mysore and Bangalore that when such plants are discovered they are uprooted, and that prosecutions are instituted if there is evidence of their having been cultivated. One informant states that abundant growth is to be found in three districts; but, with this exception, the official account is generally confirmed, and may be accepted as correct.

Rajputana.

Kerowli.	Kotah.
Alwar.	Jhallawar.
Dholpur.	Jeypore.
Jaisalmir.	Kishengarh.
Jodhpur.	Bikanir.
Bundi.	Tonk.
Serohi (only table).	Shahpura.

77. Memoranda have been received from the States of the Rajputana Agency named in the margin. The wild hemp is only mentioned as occurring in four of them, *viz.*, Jhallawar, Jeypore, Kishengarh, and Alwar, and that in very small quantity. The information leaves a decided impres-

sion that the wild and spontaneous growth of which mention is made is due to the germination of seed which has fallen by chance in favourable situations. There is no indication that the plant is inclined to run wild in this region.

Central India.

78. Mr. Gunion has collated the information furnished in the official memoranda from the States of the Central India Agency, and these have not been forwarded, with the exception of a memorandum of the Minister to His Highness the Maharaja Holkar. Mr. Gunion reports that "there appears to be no spontaneous growth of the hemp plant in Central India." The Minister says that "here and there a plant may be seen by road or river side or near the huts of fakirs, etc., due to the dropping of the hemp seed by consumers." There is no reason, except perhaps the somewhat greater prevalence of cultivation, why the accidental growth should be more common in the States of the Central India Agency than in those of Rajputana. It may safely be assumed that there is no material difference between the two Agencies in this respect.

Hyderabad.

79. The official memorandum by the Director of Agriculture and Commerce of the Hyderabad State reports no wild growth. The spontaneous growth, if it does exist, is not plentiful, and is only such as may be found all over India springing up directly in exceptionally favourable situations from seed accidentally sown.

Baroda.

80. The official report on the use of hemp drugs in the Baroda State by Anant Gangadhar Khoti states that "wild ganja is not to be found in this part of the country. It is neither cultivated nor does it grow spontaneously in any part of His Highness's Dominions;" and again "in none of the districts of this State does the hemp plant grow spontaneously." There may possibly be some confusion in the mind of the reporter as to the wild ganja plant being specifically distinct from that which is usually cultivated, for there is some small extent of cultivation in the State. But it may be safely inferred that the hemp plant has nowhere run wild, even if a chance plant may occasionally be found.

Kashmir.

81. Information regarding Kashmir is derived from memoranda by the Governors of Kashmir and Jammu and Muhammad Hayat Khan, Member of the Kashmir State Council. According to the last-named authority, the spontaneous growth in Jammu resembles in its character and the localities it affects the growth in the plains of the Punjab. He does not appear, however, to have any very exact idea of the latter growth; for he places many localities on the same footing, in some of which the growth is common, and in others scanty or even wanting. This much may be gathered, however, with tolerable certainty, that the growth in Jammu is not so abundant as in the more elevated tract of Kashmir. The tract of profuse growth in Kashmir mentioned by Muhammad Hayat Khan is Kashmir proper, extending from Baramula to Verinag and Shopayan. The country lying between Adhampur and Banhal in the Jammu province, as well as the jagirs of Bhaddarwah and Poonch, have also an abundant growth.

Two kinds of wild growth in Kashmir proper.

82. The memorandum of the Kashmir Governor mentions two kinds of wild growth which appear to have somewhat distinct characters. The growth called *talia* consists of the female plant, and is found in the Anantnag district and the Nagam tahsil of the

Srinagar district, growing on both banks of the Jhelum and of the Arveni and Karmu nallas. The bhang which grows on both banks of the Jhelum below the city of Srinagar is known as *kathiya* bhang, is weak in narcotic, and is used only for its fibre and for burning. The wild growth is very abundant. It supplies all the wants of the people, and there is consequently no cultivation.

In Jammu the growth is found in the Jammu, Bhimbar, Jasrota, and Udhampur districts. It is usually dense, and sometimes scattered. Here also there is no cultivation. The bhang of Bhimbar is said by some Punjab witnesses to be highly esteemed.

Nepal.

83. The Nepal Darbar's answers to the Commission's questions supply the following information. The hemp plant grows wild all over the State, but it is more abundant in the Terai than in the hills, and in the hills to the west of Katmandu than to the east. Two varieties of the plant are noted—one with light-coloured stems, and the other with dark. Cultivation appears to be less common than in Kumaon. This, with the alleged decrease of the wild growth east of Katmandu, might lead to the belief that the hemp plant would become less prevalent in the Himalayan region further east in Darjeeling and Bhutan. But the impression is counteracted by the evidence from Darjeeling and Assam.

Summary.

The area of wild growth.

84. The result of this survey is to show that the wild growth is prevalent throughout the Himalayas from Kashmir to the extreme east of Assam. It probably disappears at a higher altitude than 10,000 feet. It extends down the southern slopes of the mountains, and into the Punjab and Gangetic plains to a limited distance. It is found in all the hill tracts of Assam and in the two great valleys of the province. It spreads along the mountain ranges on the frontiers of East Bengal, Assam, and Upper Burma from Independent Tippera, through Lushailand, Manipur, and the country of the Kachins, to the frontiers of China. The southern boundary of the area there indicated runs approximately from Peshawar through Gujranwala, Amritsar, Umballa, Karnal, Muzaffarnagar, Moradabad, Bareilly, Shahjahanpur, and Sitapur to the Gogra river at Bahramghat, and then follows the course of that river and the Ganges to Sahebganj on the north-east of the Sonthal country. From this point the line is more doubtful, but it should probably cross the drainage of the Ganges and Brahmaputra to Netrakona in the Mymensingh district, and then turn south to Comilla, thence east to the boundary of the Chin country, and thence take a northerly sweep to Mogoung in Upper Burma, and pass on to the Chinese frontier.

The manner in which the wild growth is propagated.

85. In the region thus demarcated the plant appears to propagate itself, but it is possible that the growth on the lower slopes of the Himalayas and in the Terai springs to a great extent from seed carried down from the mountains. There is a constant supply of this both in the wild growth of the higher Himalayas and the cultivation which is carried on there; and it is possible that the mountain ranges south and east of the Brahmaputra perform the same function for the growth in the country immediately below them. In the populous parts of the Sub-Himalayan tract and the valleys of Assam the wild growth is kept up in great measure by fresh importation of seed from the ganja and bhang which are consumed by the people. This is also true, though in a less degree, of the mountain and hill

ranges. It may very well be doubted if without these aids the plant would long survive in the low country under the vicissitudes of the Indian climate and seasons. The plant appears to be very hardy when it is once well established, but it is clear from the distribution of the wild growth in India that the conditions of soil and climate under which it can attain full growth are limited.

Conditions favourable to the wild growth.

86. It will be seen from the description of cultivation in Bengal that the seeds will only germinate properly if the nursery is kept thoroughly dry and the rainfall is not excessive. And throughout the growth the plant prefers a light, permeable, well drained soil. Similar evidence is furnished by the facts connected with cultivation in the Central Provinces and Bombay and the direct testimony of witnesses in answer to the latter part of the Commission's question 13. The soil need not be rich for the mere growth of the plant, for it will be found on a ballast heap as well as a dunghill. The essential conditions noted above are present in the Himalayas with the additional encouragement of a moderate temperature. If the rainfall should sometimes be tropical and excessive, it is carried off rapidly, and the seed or seedling has every chance of surviving it. The seed seems to germinate at the elevation of Simla in May and June, and it has five or six or seven months to grow and ripen its seed before the frosts come upon it. In the Himalayan submontane tract the seed germinates in November or December, *i.e.*, after the excessive moisture of the monsoon has sunk away from the surface soil, leaving it light and friable. The growth is favoured by the light cold weather rains, and does not meet with any very trying conditions unless it wanders very far from the shelter of the mountains. If it does, it will in all probability be burnt up by the fierce dry heat of the months from March to May or June. Protected by the mountain and forest air, it survives to ripen its seed, or perishes with the advent of the monsoon. The plant is not regular as to the time of germinating, and it seems to be later in the Assam Valley than in Hindustan. But in the same patch of growth plants will be found in all stages from the seedling to the flower, if not the seed bearer.

Conditions unsuitable to the wild growth prevailing in other parts of India.

87. It is evident that throughout India outside the demarcated region there must be conditions unfavourable to the spontaneous growth. They may be conditions of permanent unsuitability or recurring vicissitudes. Probably both operate to keep the growth in check. In a very general way may be indicated heavy soils, short seasons with severe alternations of dryness and moisture, extreme drought as in Baluchistan, Sind, and Rajputana, excessive and continuous rain as on the Western Ghâts, and seasons of abnormal drought or abnormal moisture. Where, as in Travancore, the plant is alleged to reproduce itself, an unusually wet season may operate as a very effectual check to extension of the growth, either eliminating it for the time, or thrusting it back into a few well-drained localities.

Areas where the spontaneous growth may be important outside the region of wild growth.

88. South of the demarcated boundary of wild growth will be seen on the map (Vol. III Appendices) two areas in lighter shading. One includes the central belt of spontaneous growth in the North-Western Provinces; the other the country between the Ganges and Bhagirathi on the one side and the Eastern Hill Tracts on the other stretching down to Calcutta. In these areas the spontaneous growth may under favourable conditions of site and season attain some importance.

CHAPTER IV.

EXTENT OF CULTIVATION, AND ITS TENDENCY TO INCREASE OR DECREASE.

Bengal.

Cultivation confined to a limited tract.

89. In Bengal the law (section 5 of Bengal Act VII of 1878) forbids the cultivation without a license from the Collector of plants from which intoxicating drugs are produced. The cultivation of the hemp plant is accordingly confined to a compact tract having a radius of about sixteen miles, and lying in the three districts of Dinajpur, Rajshahi, and Bogra. The reasons why this tract was selected are not authoritatively stated. Cultivation was formerly carried on in the Jessore district also, but that was suppressed in 1875. The present ganja tract was probably found to be most suitable to the cultivation of the drug, and it was obviously an advantage to the excise administration to have the production confined to one area where economical and efficient arrangements could be made for supervising it.

There is no unlicensed cultivation in the tract, and the tract is being reduced in area.

90. There is practically no clandestine cultivation within this tract. The Excise Commissioner writes that "owing to the area in which cultivation is permitted being extremely limited, and to the close supervision there, there is every reason to believe that unlicensed cultivation has been all but suppressed." The ganja tract appears to have a tendency to further concentration. The 1st Assistant Supervisor of ganja cultivation states that it is now included within a radius of about fourteen miles, having been reduced from a radius of twenty miles since 1866, and he gives the following explanation of the change: "The gradual reduction in the extent of the tract was due to the fact that by the removal of jungles in the villages not far off Naogaon more land became generally available for cultivation, and more ganja was produced. Purchasers having ganja near Naogaon do not naturally like to go to distant villages for their supplies." The remote villages in the north, south, and east of the tract have accordingly given up the cultivation.

The area cultivated.

91. The area cultivated in 1892-93 was 3,540 bighas, an area far larger than the crop has occupied for twenty years past. But in the year 1891-92 the cultivation was the least in the same period, and doubtless the short outturn had to be made up in the following season. The cultivation of the two years together is not remarkably high. The following explanation by the Excise Commissioner must be read with the statistics of cultivation: "It will be observed that, except in the past year, there has been no material increase in the area under ganja cultivation during the last twenty years. The column shows the quantity of land in which the crop finally matured, excluding such land as was cultivated, but in which the plants failed altogether; and therefore, although it would appear that cultivation was greatly curtailed during the years 1875-76, 1878-79, 1879-80, 1885-86, and 1891-92, this was not really the case in all the years excepting 1885-86, as the plants in large areas under cultivation were destroyed in these years by heavy floods, and such lands were not taken into account. The decrease in the area cultivated in 1885-86 was due to the smaller profits of the cultivators in the preceding two years. The high price which the drug had realised in 1891-92 owing to wholesale failure of the crop in the previous year caused by inundation

induced a large number of raiyats to take up lands for cultivation during the following year. Some raiyats are regular growers of ganja, and annually set apart a portion of their holdings for the purpose; others are induced to take to ganja cultivation by the high profits of one year to abandon it again when prices fall." The evidence furnishes no better account of the fluctuations than this. A bigha is about one-third of an acre in Bengal. The cultivation of 1892-93, therefore, amounted to 1,180 acres, and the average of the last five years from 1888-89 to 1892-93 is 824 acres.

Clandestine cultivation: not on a large scale.

92. Leaving the ganja tract, the evidence gives reason to suppose that there is a certain amount of rearing of scattered plants. This is, of course, carried on secretly, and in the places where the wild or spontaneous growth flourishes detection is more difficult. The Hon'ble Mr. Lyall thinks that the quantity of bhang that is now exported from the Bhagalpur Division shows that there must be cultivation to a considerable extent in that part of the country. He means that the bhang which is exported as wild must often be fostered, and perhaps to some extent sown and tended, by the occupants of the lands on which, or in the neighbourhood of which, it grows. Mr. Westmacott holds similar views because he has never found the wild plant in the jungle at a distance from habitations, but he does not indicate the localities to which his remarks apply. On the other hand, the Assistant to the Director of Land Records and Agriculture, who made special enquiries in the region referred to by Mr. Lyall, reports: "I could find no evidence of the hemp plant being actually cultivated in any part of Purnea and Bhagalpur. Everywhere it came up as a weed. In some places, however, where the plants did not grow in abundance, and would therefore seem to be an object of considerable value to bhang drinkers, I observed signs of its having been looked after with some degree of care." He then describes the signs of the plants having been attended to, and proceeds: "All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow." This evidence is a partial corroboration of the high authorities named above, but it points rather to the surreptitious production of ganja in small quantity than to the cultivation on a large scale of the plant which the contractors carry away as bhang. And all the other evidence of the cultivation of the wild plant and of unlicensed cultivation generally refers more or less distinctly to the rearing of a few plants near houses, or in enclosures, or in the midst of crops, and not to operations of a more extensive kind.

The character of the clandestine cultivation.

93. This desultory cultivation, either from ganja seed or by rearing plants which have sprung up of themselves, occurs everywhere, though the evidence does not give the impression that it is common anywhere. It is stated in Mr. Gupta's memorandum that there were 86 arrests and 71 convictions on this account in the year 1892-93. Arrests were made in 25 districts, "but all the cases were for growing a few plants (very often a single plant) in the courtyards of houses." Babu Abhilas Chandra Mukharji says that "in almost all the districts in which cases of illicit cultivation have been detected, the plants had been grown from the seeds of the Rajshahi ganja." But Mr. Basu's report and such evidence as the first part of the following extract point rather to the nurture of self-sown plants. Babu Pran Kumar Das (43) states: "I prosecuted and also tried some cases of

nourishing and promoting the growth of hemp plants. There was ample evidence of nourishment, such as soil properly prepared, watering, manuring, and otherwise taking care of, but in no case was there any evidence of cultivation. I, however, suspected that it was cultivated in a few cases. In Gaya I found plants grown in a field and being taken care of just as other crops. Generally the ganja smokers grew it in places hidden from the public view. Inside house compounds a few only are grown. The largest (*sic*) I saw was a field in Gaya, may be 20 or 25."

The divisions where clandestine cultivation appears to be most common.

94. The Bhagalpur, Patna, Dacca, and Rajshahi Divisions appear to be those in which this illicit rearing is most prevalent, and the districts of Jessore, Cuttack, and Midnapur are also mentioned, but by only one witness in each case. It will be seen that this distribution agrees pretty closely with the prevalence of the wild growth. The quality of some of the evidence may be judged from that of a zamindar who wrote that "hemp (ganja) is said to be cultivated in certain parts of the Mymensingh district bordering the river Jamuna." The Board of Revenue ordered the Collector of Mymensingh to report on this allegation, with the result that the babu could not specify the villages in question, and that he was clearly, in the Collector's opinion, labouring under some misapprehension. The witness's statement indicated cultivation of a far more systematic kind than really existed, but it is unlikely that his information was entirely mistaken, and there is evidence in corroboration of the desultory kind of cultivation in Mymensingh. The evidence as a whole does not justify the belief that the wild plant is systematically cultivated or fostered to the extent suspected by Mr. Lyall even in the Bhagalpur and Monghyr districts, but it does show that the secret and desultory kind of cultivation is not uncommon in the divisions above named, and is rare in other parts of the province.

Kuch Behar.

95. Cultivation of the hemp plant is prohibited in the State of Kuch Behar, and it is probable that secret cultivation is only carried on to the same extent as in the surrounding British territory.

Tributary States of Orissa.

The extent and character of the cultivation.

96. It is notorious that a considerable amount of ganja and bhang is produced in the Garhjat. It is largely consumed in the British districts of Orissa, being either smuggled in or imported under pass. At one time the cultivation of the plant was prohibited within three miles of the British frontier, but that restriction has been removed, and it is now entirely uncontrolled. It is difficult to gauge the extent of the practice. In the collection of correspondence on this subject, the Commissioner is quoted as reporting that there were 1,000 consumers in the Angul State alone, and that they all grew ganja, selling only the surplus above their own wants. Babu Abhilas Chandra Mukharji holds the opinion that the outturn is very considerable, and capable of supplying the wants of all Orissa. One witness describes a spontaneous growth appearing in fertile places and never abundant; evidently the sort of growth which commonly springs up on rubbish heaps in the neighbourhood of habitations. He states that there is no cultivation, but in saying this he must be referring to regular field culture, for he states that people grow the plant for their own wants and sometimes sell it, the total production in his State being about twenty maunds a year. The District Officer of Angul (34) describes the same sort of cultivation, and says

that he has never seen more than twenty plants growing together. This account is confirmed by the Khas Tahsildar and Deputy Collector in Angul (73) and by Mr. Toynbee (4), who is the only official witness of superior rank who has made a tour of any duration in that country. It is pretty clear that there is no regular field cultivation in the Garhjat, and that the homestead or garden cultivation is quite uncontrolled and extremely common.

No decided evidence of increase in the cultivation.

97. Witnesses (62) and (52) think that the cultivation is increasing, the former because the sale of Rajshahi ganja in Orissa has fallen off, and the latter because the restrictions on cultivation in the Tributary States have been withdrawn. Witness (13) of the Central Provinces, who is Extra Assistant Commissioner and Diwan of the Sonpur State, reports that the cultivation in the Boad State where it borders on Sonpur has increased since 1889 "because (1) it has not been allowed in the latter State; (2) it can be had cheaper than that supplied from the Government godowns; (3) people say that ganja manufactured from plants cultivated in the Boad State, which are similar to those cultivated before in Sonpur, is liked by them better than the flat ganja, which they think is more injurious to their health." It may be that the prohibition of cultivation in the Central Provinces States has given an impulse to it in the Garhjat even beyond the limits indicated by this witness. But it cannot be said that there is evidence of a decisive character showing any important extension of cultivation of late years.

Political States of Chota Nagpur. Cultivation is under restriction.

98. All the detailed information that can be gathered of cultivation in the political States of Chota Nagpur comes through Mr. Grimley, Commissioner of the Division. One or two other witnesses who mention it state only the fact of its occurrence. In 1890 Mr. Grimley made special enquiries in the States on the subject, and the summary of replies from Sirguja, Udaipur, Gangpur, and Bonai seems to show that in all of them the cultivation is regularly practised, but everywhere under some sort of restriction. It would seem that the restrictions date back to 1883, and were imposed on account of representations from the authorities of the Central Provinces that considerable smuggling was being carried on from these States into that territory. It is proposed at present only to ascertain as far as possible the extent and character of such cultivation as exists.

The character and extent of the cultivation.

99. Regarding the character, it cannot be discovered that there is any systematic field cultivation. Mr. Grimley states that "there is no regular cultivation. In some of the Tributary States people smoking ganja grow the plant at their doors according to their requirements for smoking and drinking; but this is done only on a small scale." It appears from Mr. Grimley's report of 1890 that the produce is of inferior quality, and it may be concluded that the produce as well as the cultivation very much resemble those of the adjoining Garhjat. Regarding the extent of this cultivation, there is no apparent reason why it should be less than in the Garhjat, unless it be the absence of such an outlet as the Garhjat possesses in the bhang-consuming population of Puri, and the restrictions which the authorities of Chota Nagpur have succeeded in enforcing. Mr. Grimley thinks that the local production is now insignificant, and he mentions as proof of this that the

Raja of Gangpur some five or six months ago applied for permission to import ganja. On the other hand, reference may be made to a report of the Commissioner of Chota Nagpur in 1889: "The result of the inquiry was to show that a good deal of ganja was being grown, and was being sold in the Gangpur bazars to be brought into Sambalpur for sale," qualified by the following: "I have just passed through the Gangpur State, but have not visited the parts immediately bordering on Sambalpur. So far as the State generally is concerned, I have not been able to hear anything of a general cultivation of ganja, and I think it probable that the plant is grown chiefly on the borders of Sambalpur." No more definite estimate can be formed of the extent of the cultivation than that it is very considerably less than in the Garhjat States. The Chief of Jashpur, the State memoranda from Seraikela and Kharsawan, and other informants from Gangpur and Sirguja state that there is no cultivation at all, and it is said that in Sirguja the consumer has to import the drug. This evidence would indicate that in a great part of the country the practice of cultivation must be quite uncommon.

Hill Tippera.

100. Several witnesses speak to the cultivation of the plant in Hill Tippera, but they give little detail. It can be gathered, however, that the cultivation is of the ruder sort, the seed of the wild plant being often used. It is probably inferior to that of the Garhjat and the casual yard cultivation of the plain country. Otherwise it would have attracted the attention of Government, and the witnesses would have had more to say about it. Regarding the extent of cultivation, the evidence of a local officer, Babu Govind Chandra Basak (44), is probably the best. He says: "Very little ganja, say a few sérs, are grown in the Tippera Hills. The quantity is very small, for the hill authorities now import ganja under a pass from the Sudder (Tippera) golas." Still a small amount of smuggling into the plain country, both of Bengal and Assam, is said to occur. The State memorandum reports that "the cultivation of hemp is not carried on in the State."

Assam.

Cultivation prohibited and clandestine cultivation unimportant.

101. There is no authorized cultivation in the districts of Assam which are under settled administration, and prosecutions are regularly instituted against persons in whose ground the plant is found growing, if it bears any sign of having been nurtured and tended. The result is, in Mr. Godfrey's words: "This sort of cultivation is kept in check by the district officers, so there is no considerable area of it." This opinion is to be accepted rather than that of Mr. Gait, which has been quoted above, that the growth is very actively tolerated by the villagers. The plant sows itself and grows vigorously all over Assam, and there must, of course, be many instances of the desultory sort of cultivation, for the produce of the untended growth is very inferior, and the temptation to nurse a few plants is great. But there is no winking at the practice, and it cannot be regarded as important.

Cultivation in the hill ranges in and bordering the province.

102. In the Himalayan region on the northern frontier the regular cultivation probably resembles that which prevails throughout those parts of the same mountains about which there is more complete information, and consists of the more or less skilful cultivation of small patches in the immediate neighbourhood of homesteads; and it doubtless extends to the extreme north-east of the province, for there is evidence of it as far as the country of the Miris. It will probably be found also in the lofty ranges towards the Hukong valley and the north of Burma,

the country of the Khamptis and Singphos. In fact, there is information of the plant being cultivated with some care for fibre and the drugs in the adjoining Kachin Hills. But the evidence regarding the hill tracts within the province and on the southern frontiers points to cultivation of a very inferior sort, if indeed the plant is tended at all. It is said that the Nagas regard the plant as a jungle product, and that the ganja smuggled from the hills is hardly distinguishable from the produce of the wild hemp.

North-Western Provinces.

Extent of cultivation in the Himalayan Division.

103. In describing the wild growth of the North-Western Provinces, reference was made to cultivation for the production of bhang in the districts of Farakhabad and Hardoi. The true hemp plant is also very widely cultivated in the Himalayan Division principally for its fibre, but yielding charas, bhang, and seeds as secondary products. The Himalayan cultivation is irregular and scattered, but it has been estimated to amount to 250 acres in the Almora district, and, more accurately measured, at 580 acres in Garhwal. Compared with the spontaneous growth of the mountains themselves and of the region lying below them, this extent of growth is not very important, for the plant cultivated for fibre seems to be little superior in narcotic properties to the spontaneous growth.

Extent of regular cultivation in the plains.

	Acres.		Acres.
1879-80 ...	105	1886-87 ...	107
1880-81 ...	105	1887-88 ...	178
1881-82 ...	164	1888-89 ...	90
1882-83 ...	160	1889-90 ...	160
1883-84 ...	81	1890-91 ...	72
1884-85 ...	89	1891-92 ...	281
1885-86 ...	112	1892-93 ...	356

104. Turning to the plain country, the official returns give the marginally noted areas of cultivation in the district of Farakhabad, or Fatehgarh as it is called in Mr. Stoker's memorandum, for the last fourteen years. The Joint Magistrate and Excise Officer (No. 29) of the district, who presumably has access to the local records, quotes very different figures, showing a decrease of the area from 691 bighas in 1891-92 to 561 bighas in 1892-93. There is no apparent reason why the official return should not be accepted, and it shows a decided tendency for the cultivation to increase. The reason may probably be correctly traced in the sentence of Mr. Stoker's memorandum: "All this plant is converted into bhang, which is of a superior quality, technically known as *latia* (from a village in Fatehgarh district), and commanding a much higher price than the wild bhang of the sub-montane tracts." Regarding the cultivation in the Hardoi district, the official return only gives one acre in the year 1891-92. This seems hardly consistent with paragraph 9 of Mr. Stoker's memorandum, which indicates a considerable export from Hardoi; but it is possible that the explanation may be found in the fact that the cultivation is not pure, but often mixed with other crops, and that it is therefore impossible to measure it. The practice of the less systematic sort of cultivation may be very prevalent in Hardoi notwithstanding that it is not recorded. Several witnesses, however, state positively that it is decreasing.

***Patsan* is not hemp (Cannabis).**

105. The evidence generally corroborates the official account, but many witnesses have been misled by the word ***patsan*** having been used to signify the hemp plant in the translation of the Commission's questions issued by the North-Western Provinces Government. ***Patsan*** is the local name for the ***Hibiscus cannabinus*** ("Field and Garden Crops of the North-Western Provinces and Oudh"—***Duthie*** and *Fuller*). It has not, however, been difficult to detect the answers which have been vitiated by this mistake.

Homestead cultivation in the plains.

106. It does not appear that any regular field cultivation exists in the plain country beyond that which has been above described. Such cultivation as there is consists of the rearing of a few plants near houses, the tending of scattered plants sown accidentally, and perhaps the surreptitious sowing in the midst of crops calculated to afford concealment by their size and their general similarity to the hemp plant. Referring partly to this sort of cultivation in connection with the spontaneous growth, Mr. Stoker says that "in some districts the amount produced by these forms of sporadic growth is considerable, and is a constant source of complaint by the drug contractors;" and the evidence corroborates this view. He thinks, broadly speaking, that it prevails to a greater or less extent in all parts of the province lying north and east of the Jumna, and this comprises by far the greater part of the province. South of the Jumna, the Collector of Jhansi thinks that a good deal is grown in a quiet way for domestic use; and it is not unlikely, as there is no absolute prohibition, that all along the southern fringe of the province this sort of cultivation may be occasionally found.

The range of cultivation in Garhwal.

107. The best informants regarding the cultivation of the Himalayan region are Mr. Gillan (21), Joint Magistrate of Moradabad, Murlidhar (248), Drug contractor of Moradabad, Pandit Ganga Dutt (56), a retired Deputy Collector, and Dharma Nand Joshi, Settlement Deputy Collector (49). The two first allege that the cultivation is spreading because of the enhanced value of charas; the third also alleges increase, but attributes it to the general usefulness of the plant. Dharma Nand Joshi takes the opposite view, and gives as reasons for decrease that the people have become more civilized, and are changing their habits as regards the use of hemp for clothing; that newly cleared forest land, which is peculiarly suited to the plant, is no longer available; and that other crops have been found more profitable. The last witness's description of the distribution of the cultivation is interesting. It is cultivated very extensively, but more for its fibre and seeds than for charas. In the warmer parts to the south the people wear cotton clothes and are not dependent on hemp. In the north also little hemp is sown, and that in but few villages, because the people keep goats and wear woollen clothes, using the hemp only for their *chabel* or shoes, and making but little charas, which they do not commonly sell, but give to fakirs visiting Badrinath and Kedarnath. In the parganas of Chandpur and Devalgarh more largely, and to a less degree in Barah Syun, Talla and Malla Salans, Choundkote, and Badhan, the plant is widely cultivated. Roughly speaking, it is grown in about one-third of the Garhwal district. In the portion last named every cultivator of the Khasia or Dom caste in every village which is situated at an altitude of between 4,000 and 7,000 feet sows a plot equivalent to two or eight perches.

Cultivation discouraged by the idea that it is illegal: Local production of ganja has decreased.

108. There is no prohibition in this province against the cultivation of hemp, but nevertheless it is clear that a contrary impression is abroad, as is the case in other provinces which are similarly situated in this respect. Mr. Bruce, of Ghazipur (28), thinks that as regards his district the belief "is traceable to the fact that in the adjoining districts of Bengal free cultivation is not allowed." The mere fact that the sale of the drugs is a Government monopoly might well give it wider circulation. Several of the witnesses evidently think that the culti-

vation is illegal, and there is some evidence that cultivation was formerly carried on in some of the Oudh districts until it was suppressed by authority. Witness (135) says that in the time of the King of Oudh bhang used to be cultivated in gardens abundantly. Witness (251) speaks of *Mahadeva* ganja (in large bundles) being formerly made in Sitapur and Nawabganj. Witness (61) says that the district authorities having heard of the practice in Loohaisar, tahsil Fatehpur, district Barabanki, forbade it. Witness (247) mentions Sitapur and Lakhimpur and Kheri as districts where ganja was formerly cultivated, and that it has now disappeared in the Province of Oudh. According to this witness, it was fostered by the Nepalese in the parts of the province which were formerly under their domination; and it would seem that the *Mahadeva* ganja got its name from a place in Barabanki where the cultivation was formerly carried on. This origin for the name is confirmed by the evidence of other witnesses. Mr. Stoker is therefore probably mistaken in supposing that this sort of ganja was imported from Nepal. The evidence leaves the impression that a system of practical restriction is going on tending to confine the cultivation to the districts of Farakhabad and Hardoi. It also seems certain that the local production of ganja has of late years very considerably decreased.

Rampur.

109. The only Rampur witness states that there is no cultivation of the hemp plant in Rohilkhand, but there can be little doubt that the sporadic cultivation prevails in Rohilkhand and Rampur to the same extent as in the neighbouring British districts.

Garhwal and Tehri.

110. The description which has been given of the general prevalence of Himalayan cultivation must be accepted for native Garhwal and Tehri. There is no memorandum from the State and no evidence relating exclusively to it.

Punjab.

Himalayan cultivation.

111. The Himalayan cultivation of the Punjab does not differ from that of the North-Western Provinces, but from the fact that there is none in Kashmir, it would appear to decrease in frequency westward. The plant is grown principally for fibre and in small scattered patches, so that its area cannot be estimated. Mr. Anderson (10), however, ascertained in 1880 that the area in Kulu and Plach was then about 200 acres. Witness (71) states that in British Lahoul every zamindar cultivates a small patch for the sole purpose of obtaining its fibre, and that charas, which he calls bhang, is imported.

Bhang cultivation in the south-west part of the province.

112. In the south-west angle of the province there is a small amount of systematic cultivation for the production of bhang. The Excise Commissioner reports that this does not exceed 100 acres. The evidence gives figures for some districts. Thus witness (68) estimates the produce of the Muzaffargarh district at 100 maunds, which would require some 10 or 12 acres of crop. Witness (24) states that the area in the Jhang district in 1893 was only 20 kanals. In Dera Ghazi Khan the area seems to be about 30 acres. Five acres are said to be cultivated in Shahpur. Several witnesses talk in general terms of cultivation for bhang being practised. Some describe the cultivation as consisting of the rearing of a few plants in yards and gardens by fakirs and other consumers. Witness (39)

states that cultivation is carried on in every district more or less, "but more so in Hoshiarpur, Derajat, and other frontier districts." All this cultivation is stated to be for the production of bhang. Ganja is not smoked in the Punjab. The cultivation of the more systematic kind is probably not understated at 100 acres. The desultory cultivation of a few plants seems to be a wide-spread practice; but the total amount of bhang produced by it cannot be important—must, in fact, be trifling compared with what the wild growth yields.

Cultivation not increasing.

113. The evidence and other papers do not show that the cultivation is other than stationary. There is no legal prohibition to the growth of hemp, but it is probable that it is discouraged and restricted by the fact that the sale of the produce is under regulation.

Punjab States.

114. There does not appear to be any artificial restriction in any Punjab State on the cultivation of hemp, not even in Nabha, where the use of ganja and charas is said to be prohibited. Bahawalpur is, however, the only State of those furnishing information in which cultivation for the narcotic is admitted to exist. It is not confined to any special locality. Farmers grow small patches with other crops, generally near wells. It yields bhang, only in sufficient quantity for local consumption, and seeds which are used for food as well as for fresh sowing. It is stationary in extent. Chamba reports that the drugs are not produced, but it is probable that cultivation for fibre and seeds exists in this State as in the rest of the Himalayan region. There is no reason to suppose that the cultivation, which is habitual at certain elevations in the Himalayas, *i.e.*, from about 4,000 to 8,000 feet, is not practised by the Native States. Mr. Coldstream refers to cultivation in Bashahr and near Kasauli, and says that in the former tract the plant produces resin. But it certainly appears from Mr. Anderson's report regarding Kulu, the evidence of witness (71), and the fact that the evidence about the preparation of charas is wanting in certainty and definiteness, that charas is not looked upon as a regular bye-produce of hemp cultivation to the same extent that it is in Garhwal further east. It would appear that towards Kashmir the wild plant becomes more extensively used for the preparation of drugs.

Central Provinces.

The progress of restriction of cultivation.

115. Going back to the year 1872-73, the Excise Commissioner writes that "in almost every district a few hemp plants were to be found in the gardens of cultivators, and it was only in Raipur and Bilaspur that a license-fee was imposed on cultivation." This general and unsystematic cultivation was an impediment to excise management and to the control which the Government of India enjoined on the Local Governments as the result of the inquiries made in 1873. By special inquiries instituted in 1873-74, it was ascertained "that in every district, except perhaps Hoshungabad, Narsinghpur, Mandla, Chhindwara, and Bilaspur, the amount privately grown for home consumption was insignificant, while in Sambalpur it was *nil*, home-growing having been prohibited by executive order of the Deputy Commissioner." From this date the general restriction of cultivation was kept steadily in view, and before long a system of licensing cultivation was introduced. Penalties for unlicensed cultivation were ordained and enforced in many cases. The districts where regular cultivation has

been chiefly carried on during the last twenty years are Nagpur and Nimar, but up to the year 1878-79 licenses for cultivation of small areas were granted in one year or other in twelve other districts, of which Wardha and Chhindwara were the most important. From this year cultivation was confined to Nagpur and Nimar. It gradually fell off in the former of these districts, and since 1890-91 it has been restricted by law to the Nimar district. The Deputy Commissioner of Nimar now reports that "ganja is grown in sixty or seventy villages in Nimar. The cultivation is confined to the western half of the Khandwa tahsil." And he gives the following figures of area for the last three years:—

	Acres.
1890-91	477
1891-92	963
1892-93	984

The figures of cultivation in Excise memorandum to be corrected by figures given by Deputy Commissioner, Nimar.

116. Mr. Robertson's figures for the last twenty years frequently differ from those of the Excise Commissioner's tables, and he explains that they "represent the area actually cultivated, not the area for which the licenses were granted. The latter is almost always in excess, as the cultivator generally asks for a license for more land than he means to plant in order to ensure against his being proceeded against for excess cultivation." This explanation, applied to Nagpur as well as Nimar, may perhaps account in some degree for the abnormally high figures of cultivation shown by the Excise Commissioner in 1877-78, 1884-85, and 1885-86; but it will be seen that in 1884-85 the quantity of ganja deposited in the central stores was unprecedentedly high also (paragraph 32, Excise Memorandum). If the excess Nimar cultivation be deducted and the year 1878-79, in which the figures agree, be included, it will be found that the total area of cultivation has gone above 1,000 acres in only four years, *viz.*—

	Acres.
1877-78	1,605
1878-79	1,285
1884-85	1,166
1885-86	1,659

The normal acreage of cultivation.

117. Between these years of high figures will be found, after making similar deduction in 1882-83, a period of great depression, *viz.*, from 1879-80 to 1882-83. The Excise memorandum shows that the whole of this period from 1877-78 to 1885-86 was marked by drastic changes in the excise arrangements, and it may be noted that it was coincident with extensive cultivation in the neighbouring Bombay district of Khandesh. Matters then settled down, and the normal demand under present arrangements seems to be met by cultivation closely approaching 950 acres. For 1891-92 the Deputy Commissioner's figures of 963 acres is taken in preference to the Excise Commissioner's 653 acres. Abnormally low figures are found in 1887-88 and 1890-91, which are probably to be accounted for by a surfeit of stock from previous years.

Illicit cultivation is rare.

118. The desultory and illicit cultivation, if carried on at all, is confined to gardens and backyards, and is never to be found in open fields. The authorities believe that it has been practically suppressed, and the Commission have heard so little of its existence

that they must accept that view. The Inspector-General of Police and Prisons is the only witness who believes that it is common. Mr. Naylor, District Superintendent of Police, states that "about six or eight cases are annually reported of the ganja or hemp plant being grown in *baris*;" but he adds: "I think the illicit cultivation has now almost ceased." Some few witnesses state that hemp is sometimes raised from the seed of the wild plant, and in saying this they must have the irregular cultivation in view; but the same witnesses do not clearly depose to the existence of such cultivation in the Central Provinces.

Feudatory States.

119. The Feudatory States, most of which lie in the extreme east of the province, have agreed not to allow cultivation and to import their ganja from the Government godowns at Khandwa. It is possible that the yard cultivation which was formerly common has not been entirely suppressed in these States, for it is unlikely that the supervision in such remote and wild tracts can be very strict. But the responsible officers of some of them—Khairagarh, Sonpur, and Bastar—give assurance that the cultivation has been stopped.

Madras.

Distribution of cultivation as given by the Deputy Director, Land Records and Agriculture.

120. The Deputy Director, Agricultural Branch in the Department of Land Records and Agriculture, has, at the instance of the Commission, made personal inquiries into the cultivation and manufacture of ganja in the Presidency, and recorded the results in bulletin No. 29. The opening paragraph of the bulletin gives a general view of the distribution of the true hemp plant (*Cannabis sativa*) throughout the province: "Though grown here and there in most parts of the Presidency in backyards, it is found as a regularly cultivated field crop in only two localities, *viz.*, in the Malayali villages on the Javadi Hills in North Arcot, and in one or two villages in the Bapatla taluk of Kistna district. It is also raised to a certain extent in the hilly parts of Vizagapatam and Ganjam, but there seldom more than a few plants are grown by each person." The localities where field cultivation is carried on are no doubt correctly indicated in this passage, and they are the principal ones; but the statistics which have been furnished to the Commission by the Government of Madras as well as the evidence lead to the belief that regular cultivation to a greater or less extent is to be found in other districts. And there is reason to think also that the bulletin does not give a correct idea of the general prevalence of the practice of home cultivation in yards and gardens. This may have been outside the scope of Mr. Benson's inquiry. At the close of the pamphlet Mr. Benson writes that "in both localities it is stated that of late years the area planted with hemp has been reduced, the price offered for ganja having fallen with the restriction of the demand owing to the introduction of the system of licensing retail vendors. A few years ago the crop was also grown to some extent in the Pulivendla taluk, Cuddapah district, but its growth there has now been abandoned."

Extent of regular cultivation: Figures of doubtful accuracy.

121. The official statistics of cultivation are admittedly inexact, and the imperfection appears to be due to two causes. The Acting Secretary to the Board of Revenue in the Department of Separate Revenue reports in his letter No. 1839-Mis., dated 1st May 1894, that "accurate figures are nowhere available, as no accounts are maintained respecting the cultivation of the plant." And further on in the same report he refers to the second cause of error in the following words: "It is very

probable that the Collector here, as elsewhere, has confounded the area of the narcotic hemp plant (*Cannabis sativa*) with the fibre hemp (*Crotalaria juncea*), which is a totally distinct plant. The Board has been informed by Mr. Benson, Deputy Director, Agricultural Branch of the Board of Revenue, that the *Cannabis sativa* is never grown in this Presidency for fibre, and that the hemp plant grown for fibre must be the *Crotalaria juncea*." Under these circumstances it is useless to make a detailed examination of the figures of cultivation for past years, and there is little chance of its being possible to arrive at any definite conclusion as to whether the area of regular cultivation tends to increase or decrease. The area under regular cultivation in 1893-94 appears from the statistical table and the correspondence arising out of it to be as follows:—

	Acres.	Cents.
Ganjam	0	62
Godavari	1	12
Kistna	201	7
Kurnool	5	0
North Arcot	77	0
Coimbatore	50	0
Nilgiris	2	0
Nellore	1	44
South Canara	7	0
Total ...	345	25

But in Mr. Horne's memorandum South Arcot and Cuddapah are credited with 5 and 30 acres respectively, which would raise the total to 380 acres. It may, however, be doubted in view of Mr. Benson's statement that cultivation in Cuddapah has been abandoned, and of the fact that fibre is mentioned in connection with the cultivation in South Arcot, whether this cultivation really exists. The North Arcot area was 200 acres for 1892-93, and the fall in 1893-94 is said to be due to the restriction of the trade in the drugs and to the absence of seasonable rains in the hills. The total area of 350 acres is probably under the mark.

Home cultivation common, but probably decreasing.

122. The evidence leaves no doubt that the home cultivation of a few plants is carried on in nearly every district in the Presidency, and it is difficult to believe in view of its general prevalence that it is altogether non-existent in Madras, Chingleput, and Tanjore notwithstanding the direct negative of the Collectors of the last two districts. On the other hand, there is reason to think that the regulation of the traffic in the drugs, which was introduced in 1889, and has been applied with greater care and stringency in recent years, has created the impression in the minds of the people that the cultivation is illegal. The occasional action of preventive officers in warning growers of casual plants, and perhaps in causing the plants to be uprooted in some instances, may have enforced this idea. The result on the balance of evidence seems to have been to reduce this kind of cultivation, and it is quite possible that many of the witnesses who depose to the existence of it are speaking from memory and experience rather than from recent observation. The Collector of Cuddapah, a district where there is reason to suspect the existence of a small amount of field cultivation as well as much home growth, argues that the excise

restrictions may have reduced the cultivation which serves the markets, but must encourage the home growth, which is not illegal, for private consumption. Several other witnesses infer that there must be increase of cultivation from the spread of the taste for the drugs. One of the most definite statements of the last class is that of the District Forest Officer, North Malabar, that, "owing to the greater demand for ganja from the coast, cultivation as described above is slightly increasing year by year." Another witness states that in Ganjam the cultivation is increasing in the Agency tracts while it is declining in the plains. Reference may be made to another specimen of the arguments to shew increase. After quoting the returns of cultivation in the Bapatla taluk, which show steady decrease, as the only ones available, the Acting Sub-Collector at Guntoor writes: "As far as Baposia taluk is concerned, the figures given above seem to indicate that the area under hemp cultivation is gradually decreasing. But I am inclined to think that these figures are not reliable." And, after alluding to the introduction of excise arrangements and increase of revenue, he proceeds: "This shows that there is a possibility of large future developments in the trade in hemp drugs, and the hypothesis that the cultivated area is gradually decreasing must necessarily be wrong." Being ignorant of the method of keeping agricultural statistics in the Madras Presidency, the Commission are unable to judge how far the Sub-Collector is justified in mistrusting the figures he quotes. That some ground exists is shown by the admission of the Secretary to the Board of Revenue quoted above. But, taking this for granted, the arguments cannot be accepted, for there are other sources of ganja supply besides the Kistna district, and the expansion of the revenue does not necessarily imply an increase of production or even of consumption.

The extent of home cultivation.

123. There is not after all any great body of evidence to show increase of cultivation, and the increase indicated is not very decided, except perhaps in the case of Angappa Gonuden (189), who says: "Hitherto cultivation of the ganja plant was very rare. But it has now considerably increased, since more people resort to its use now than before." This witness is worth quoting, because his answers are generally sensible, and he appears to be in the habit of cultivating the plant himself. But it is advisable to guard against an apparent tendency to exaggeration. His description of the extent of cultivation in Salem may be quoted here with the above reservation as probably typical of several localities in the Presidency: "There is little of the ganja plant cultivation in my district of Salem. They are all for the production of ganja alone. One-fourth of the houses in Salem have on an average half a dozen plants in each backyard. The same number of plants can be found in at least 2 per cent. of the fields in the villages of Salem, Ather, and Namakul taluks." In most districts the extent of backyard cultivation falls short of this description. In Cuddapah and Coimbatore the state of things would seem to resemble Salem, with the addition that there are probably some small patches of field cultivation grown for profit. In the hill tracts of Ganjam, Vizagapatam, and Godavari, and to a very much less degree in the Wynaad and the Nilgiris, the home cultivation seems to be carried on for the market, the produce being used for barter or sale to licensed dealers. There is no formal restriction on cultivation, and the cultivators are allowed to sell the produce to the licensed

dealers. The whole of the homestead cultivation must, therefore, be regarded as entering into the licensed consumption. Looking to the extent of this cultivation throughout the Presidency, and especially in the hill tracts of the north and south, it will not be extravagant to say that the total area in which the hemp plant is cultivated is perhaps double that of the regular field cultivation.

Madras States.
Sondur, Banganapalle, Pudukottai, Travancore, and Cochin.

124. The only cultivation reported is two acres in Banganapalle. But the plant is found uncultivated in Travancore, and there is reason to believe that in this part of India the spontaneous growth is associated very intimately with cultivation. It may therefore be inferred, in spite of the fact that the drugs are imported, that there is some home cultivation in that State. And from the survey of the whole Presidency, which showed a general prevalence of home cultivation, it may be presumed that it is to be found in all the States, more commonly in Travancore than elsewhere, owing to the country being more favourable to the growth on account of a great part of it being hill land. It appears also that in Travancore the Kanekars, a hill tribe, are allowed to grow the drug for their own consumption.

Bombay.
Extent of regular cultivation.

125. The districts in which the regular cultivation of hemp is now principally carried on are Ahmednagar and Satara, and their acreage for the last eight years is as follows:—

	Ahmednagar. Acres.	Satara. Acres.
1885-86	1,030	411
1886-87	789	558
1887-88	637	173
1888-89	268	170
1889-90	830	368
1890-91	605	471
1891-92	676	317
1892-93	382	299

In the following districts also there is a small extent of regular cultivation:—

	Five years' average. Acres.
Khandesh	30
Poona	12
Nasik	16
Sholapur	46
Bijapur	4
Broach	¼
Surat	11

These figures are taken from the table submitted by witness 49, Superintendent, Office of Survey Commissioner and Director of Land Records and Agriculture, because it is more complete than the statistics furnished by the Commissioner of Abkari, and probably more correct. In the year 1885-86 Khandesh grew as much as 311 acres, but the area has now fallen to 9 and 10 acres in the last two years. The district adjoins the Central Provinces district of Nimar,

and its hemp cultivation has probably been checked by the excise system of the latter province, which underwent important changes about the year mentioned above.

126. The total cultivation of the Presidency, excluding Sind, for the last eight years is as follows :—

Cultivation decreasing.

	Acres.		Acres.
1885-86 ...	1,844	1889-90 ...	1,341
1886-87 ..	1,488	1890-91 ...	1,201
1887-88 ...	904	1891-92 ...	1,093
1888-89 ...	533	1892-93 ...	812

One or two witnesses hint rather than indicate specifically the existence of cultivation in the Ahmedabad and Kaira districts of the Guzerat Division and in Thana in the Konkan. But there is certainly no regular field cultivation in these districts. Except about twelve acres in Surat and Broach for the production of what is called bhang, the whole cultivation is practically confined to the Deccan or Central Division. It has been suggested that the excise system of the Central Provinces is to account for the fall of the cultivation in Khandesh from the high acreage of 1885-86, and it may have affected districts at a greater distance from the frontier. But it can hardly be accepted as the explanation of the extraordinarily low figure of 1888-89. The reduction in this year was shared by the four contiguous districts in the southern part of the Central Division and not by the districts of Nasik and Khandesh in the northern part, and was probably due to an unfavourable season. There is no official explanation of it. In the succeeding year cultivation recovered, but has since shown a steady decrease. Witnesses state that the irksome conditions imposed by the excise system render the cultivation unpopular, though it is not burdened with any direct tax or license. This may well be the cause of the decrease.

127. Regarding homestead cultivation, the Collector of Thana writes : "The plant is not cultivated in the Konkan as a field crop, nor even as a market crop in gardens, but it occurs in small numbers in many private gardens, and I have seen specimens that seemed to me to be self-sown, and afterwards taken care of by the gardeners." This is the only positive evidence of the existence of such cultivation in British territory in the Bombay Presidency, though there are to be found hints that it is carried on to a very small extent in the Ahmednagar and Dharwar districts in the present day, and some definite information that it was formerly practised more widely. It seems certain that the extent of it in British territory is now absolutely insignificant.

Home cultivation is rare.

128. The Bombay Presidency contains a great number of Native States whose lands are intermixed with British territory in a very complicated manner. Sometimes they are constituted into separate political charges, and some are under the political supervision of Collectors of British districts. In the Southern Maratha Country, Kolhapur with many smaller States forms a political charge covering a very considerable area. The leading State has prohibited the cultivation of hemp, but the following minor States allow it with in some cases the restriction of a

Native states.
The south of the Presidency.

license and the regulations as to sale of the produce which exist in British territory :—

	Acres.
Sangli	44
Miraj (junior)	13
Jath	30
Jamkhandi	60
Total ...	147

There are also ten acres of regular cultivation in the Aundh State under the Satara Agency, which lies in the Deccan Division. There is no information of any homestead cultivation in the States in the south of the Presidency, nor of field cultivation in any State except those named above.

The north of the Presidency.

129. Turning northwards, there is no evidence of any cultivation till Baroda is passed. This State is under the direct control of the Government of India, and may be dealt with separately. In the Rewa Kantha Agency the plant is not cultivated at all. In the Palanpur Superintendency the authorities of Palanpur and Radhanpur report that there is no regular cultivation, but the plant springs up spontaneously to a very small extent in irrigated lands, and in fields situated on river banks and beside water. The information seems to imply that the plants are tended, and from Palanpur it is stated definitely that the plant is sometimes grown in gardens. It may be noted that a small import of bhang from Palanpur into the Bombay district is said to occur. The same state of things probably prevails in the Mahi Kantha Agency; for though it is reported from Idar, the principal State, that there is no cultivation, the Native Assistant to the Political Agent states that the plant is not cultivated "to any extent," clearly implying that there is some cultivation. And matters are not very dissimilar in Kathiawar, for the Assistant Political Agents in charge of the Halar and Gohilwad Prants write that there is no cultivation for the market, but in some places a few plants are reared in sugarcane fields and *wadas* for home consumption and gifts to holy men. The report from the State of Cutch describes similar cultivation. A witness of Hyderabad (Sind) states that ganja is imported from Panvel and Cutch. This may, and probably does, mean that it comes through Cutch from Panvel, a place near Bombay, where a wholesale business is carried on.

Sind and Khairpur.

130. There is a certain amount of cultivation in Sind for bhang, principally in the Shikarpur district, and some in the Khairpur State also. The average areas for quinquennial periods during the last twenty years and for the year 1892-93 are given below :—

		Acres.
Karachi ...	1st period	87
	2nd „	95
	3rd „	140
	4th „	81
	1892-93	65

		Acres.
Hyderabad	1st period	15
	2nd "	...
	3rd "	5
	4th "	14
	1892-93	3
Shikarpur	1st period	164
	2nd "	175
	3rd "	143
	4th "	166
	1892-93	231
Upper Sind Frontier.	1st period	3
	2nd "	Fraction.
	3rd "	"
	4th "	"
	1892-93	...
Khairpur...	1st period	156
	2nd "	151
	3rd "	168
	4th "	84
	1892-93	38

There has never been any cultivation in the Thar and Parkar district. The total for the first period is 425 acres as compared with 337 acres for the year 1892-93. There has been a remarkable falling off in recent years in the Karachi district and the Khairpur State, and 350 acres may now be taken as the normal area of cultivation in Sind. The cultivation of isolated plants near houses would appear to be extremely rare. The evidence does not speak of it.

Aden.

131. The hemp plant is not cultivated in Aden at all.

Berar.

132. The cultivation of the hemp plant was not restricted in Berar until 1875, and in that year a system of granting licenses, subject to a fee of Rs. 8 irrespective of area, was introduced. The system was modified in 1884, when the license fee was raised to Rs. 10 per acre. The total area cultivated since 1877-78 has been—

Year	Acres.	Year	Acres.
1877-78	85	1885-86	106
1878-79	94	1886-87	58
1879-80	241	1887-88	38
1880-81	139	1888-89	67
1881-82	143	1889-90	60
1882-83	84	1890-91	35
1883-84	87	1891-92	46
1884-85	80	1892-93	86

And it has been confined to three districts in all but the first of these years, the figures for the last year being—

		Acres.
1892-93.	Akola	51
	Amraoti	22
	Buldana	13

Akola has always had the greatest area under the crop, the second place being taken by each of the other districts in different periods. There appears to be a tendency for the cultivation to increase in the last three years, which is probably connected with the fact that in some *talukas* foreign ganja is being imported, showing that the present production is not sufficient for the home market. Illicit cultivation hardly exists at all.

Ajmere.

133. The memorandum from Ajmere reports an insignificant amount of cultivation for the production of bhang. In 1886 the total area was reported to be 4 *biswas*. There is no restriction on cultivation, but it is only carried on by *malis* and Hindu ascetics, and the Brahmans of Pushkar. The District Superintendent of Police says that the produce has fallen to 40 maunds, and the Abkari Inspector also states that the cultivation is on the decrease. The extent of it would appear to depend a great deal on the character of the season.

Coorg.

134. In Coorg cultivation is allowed under license, but no one undertakes it openly. The spontaneous growth that springs up near the huts of coolies and wild tribes, the Yeravas and Kurubs, is sometimes fostered and tended. From the account of cultivation given by witnesses (1) and (2), it would appear that the plant is sometimes sown deliberately, and treated with some care. The extent of the whole cultivation must, however, be very trifling. It is reported that there have been eight prosecutions for illicit cultivation in the last two years.

Baluchistan.

135. The Political Agent and Deputy Commissioner of Quetta and Pishin reports that the hemp plant is cultivated to a very small extent in one or two villages of the Quetta Subdivision, and that the produce, which is sold to the contractor, amounted last year to 12 sérs. In his evidence the Deputy Commissioner mentions the cultivating village Ahmed Khanzai. The small quantity of the drug produced would seem to indicate that it is charas. The Political Agent, Kalat, states that the plant is not cultivated on land under the administration of the Political Agent, and that an insignificant amount is grown in the territory of the Khan of Kalat. These facts are corroborated by one witness.

Burma.

Extent of cultivation before the prohibition.

136. It has already been seen from the evidence of Mr. Lewis (19) that the hemp plant was formerly cultivated in Upper Burma. And it would appear to have been cultivated on a considerable scale, for it was the sole source of supply to the shops in Lower Burma. The information collected by Mr. Bridges, Commissioner, Eastern Division, though it shows that under Burmese rule the plant was not uncommonly reared in yards and gardens, does not convey any idea of the extent of the cultivation in the days before prohibition, when the crop must have been worth grow-

ing on the frontier of Lower Burma. The Deputy Commissioner of Mergui states that in those days the plant was cultivated in parts of the Tenasserim township, and some other localities in that division of the province. The Deputy Commissioner of Pegu also writes that before the prohibition the hemp plant is reported to have been abundantly cultivated in Bassein district, and in small quantities in Pegu.

Extent of cultivation in the settled districts at the present time.

137. It does not appear that the Burmans proper were ever given to the hemp drugs, and it is not therefore surprising that the more extensive cultivation in Upper Burma should have ceased with that of Lower Burma directly the prohibition was passed and the market in Lower Burma was closed. Some survival of the practice which supplied the shops is, however, indicated in the evidence of Mr. Tarleton, District Superintendent of Police of Thayetmyo (29), who says that " certain villages round Tindau and Thetngaibyin in the Allanmyo Sub-division are in the habit of trading in ganja, which they bring into Allanmyo and Thayetmyo and sell to natives of India." Unfortunately this witness was unable to attend in answer to the invitation of the Commission, and they are therefore left in doubt as to the precise value of the statement. Mr. Bridges states that he has frequently noticed in the diaries of excise officers in Upper Burma references to the cultivation of ganja; and again—" In Upper Burma the growth of the plant in a small way by consumers for their own use is general, but the consumers are few." Mr. Fowle, Sub-divisional Officer, Kyauktau, in the Pegu district, reports that the hemp plant is grown in back gardens in the Wuntho township at the base of the spurs of hills radiating from the Maingthong peak. Other official witnesses state that a few plants are still occasionally cultivated in secret, and that prosecutions are sometimes instituted on this account. This testimony comes from Lower as well as Upper Burma. But it appears on the whole that the practice is efficiently checked in the settled districts. The districts of Thayetmyo, Meiktila, Kyauksé, and Mandalay are perhaps indicated as those in which it is most prevalent. It is of course impossible under the circumstances to form any estimate of the extent of this cultivation.

Cultivation on the frontier and in the remoter regions of the province.

138. The Deputy Commissioner of Mergui mentions the cultivation of the plant in Siam beyond the frontier of Burma. The Commissioner, Eastern Division, and the Inspector-General of Police speak of cultivation in the Danu country which lies between Burma and the Shan States proper, and part of which is British territory. A former chief of the Shan State of Nyaungwe describes the cultivation in his own country, which is probably typical of the practice of the Shans over a much larger area. At this point the Kachin tribes appear to be mingled with the Shans, and their habit of growing the hemp on a considerable scale for fibre is described by Mr. Bridges and the ex-Sawbwa of Nyaungwe. This habit probably adheres to the Kachin race in their own country to the north, and there is no apparent reason why it should not be found over the continuous mountain tract which stretches up to the Province of Assam. In the Danu and Shan country the cultivation is of the homestead kind; a few plants only are reared in each case for home consumption. The practice is more common among the Danus than the Shans, and the produce would appear to be more than sufficient for home consumption, for some quantity

is smuggled into Burma. In the Upper Chindwin district there is a small amount of secret cultivation.'

Mysore.

139. In the civil and military station of Bangalore the cultivation of the hemp plant is prohibited, and in the last seven years there have been two or three prosecutions for breach of the regulation. There can be no cultivation except a stray plant here and there. The Mysore laws provide that hemp may be cultivated under license. Cultivators appear to have made two or three unsuccessful experiments, and to have abandoned the idea of growing the plant as a regular crop. This information is furnished in the memorandum of the Excise Commissioner. Mr. McDonnell, the Special Assistant Excise Commissioner, who seems to have made a study of the whole subject of the hemp drugs, describes the method by which a superior quality of ganja is produced locally, and he thinks that its great value in the market as compared with imported ganja must be a strong inducement to clandestine cultivation in yards and gardens. He is evidently of opinion that this is not at all unfrequent, especially in towns and large villages where concealment is more easy. He is corroborated in some degree by other information. The Excise Assistant Supervisor, Tumkur district, says, however, that the hemp plant "is cultivated for the production of ganja, but to a very small extent, all over the province. The extent of cultivation has considerably decreased since the introduction of the rules..............for regulating and restricting the cultivation, possession, sale, import, and export of ganja;" and this must be clandestine cultivation, for it seems certain that no licenses have been taken out. The Sub-divisional Officer, Chick Ballapur, says: "The local cultivation and preparation of ganja are at present confined to the Chintamony taluk." On the whole, however, it would appear that the cultivation is inconsiderable, and the local production quite insignificant.

Hyderabad.

140. The official memorandum of the Hyderabad State reports that no license is required for cultivation, but it is understood that the produce must be sold to the farmer of the monopoly. Only enough is grown for local wants: the cultivators are few because special knowledge and skill are required for the cultivation. No statistics are supplied. The Director of Agriculture and Commerce states that the land under ganja in the whole dominion may be roughly estimated at about 300 or 400 acres. The cultivation is carried on in a small tract immediately south of Hyderabad and in the Aurangabad and Nandair districts, which lie on the north bordering Khandesh and Berar. By another informant the Indore district lying between Nandair and Hyderabad is mentioned, and another states that in Mahratwada and the Canarese districts, which latter must lie on the south and south-west of the dominion, it is grown to about the same extent as tobacco. The information gives the impression that only small plots are sown by each man. Besides this regular cultivation, a few plants may occasionally be reared in yards and gardens, but the produce from unskilful cultivation is said to be very inferior. About 350 acres may be taken as a fair figure for the whole State. One informant speaks of fluctuation in the extent of cultivation, and attributes a slight increase to the class of fakirs and gosains becoming more numerous.

141. The memoranda from the marginally noted States show that, except in Dholpur, no attempt is made to regulate the cultivation of hemp. In Dholpur permission is required to cultivate, and it appears that no one asks for it, and that there is consequently no cultivation. In all the other States cultivation for the production of bhang only is reported. Only five States furnish figures from which to judge of its extent—*viz.*, Jhallawar 30 acres, Jaisalmir 11 acres, Jeypore 10,000 maunds, Bikanir 3 bighas, and Shahpura 25 bighas. The Jeypore figure, if not a clerical mistake or error of calculation, indicates a large rural consumption, for the following quantities only are accounted for as being exported or sent to the capital:—27 maunds exported, 50 maunds transported, and 300 maunds imported from districts into the city: total 377 maunds. The statistical table at the same time shows an import of 354 maunds of bhang and no exports. In the first four States here named the cultivation would appear to be of the more systematic kind. In Shahpura and the rest of Rajputana the plant is sown in gardens either in small patches or in favourable positions, such as the sides of water-channels, or scattered among and around other vegetables. The figure given for Shahpura is an estimate of the aggregate quantity of this kind of cultivation. It appears that in Serohi a contribution is levied in kind from the cultivators and presented to the temples of Mahadeo. The average of these contributions for ten years was one maund of ganja and forty maunds of bhang. A witness from Bhartpur states that the plant was formerly cultivated, but is not now, and the official return shows no cultivation. Here only and in Bikanir is there any evidence of fluctuation in the practice, and in both instances decrease is indicated. The plants seems to require irrigation everywhere, and over a great part of the Agency water is scarce. This must operate as a check to cultivation. As a broad general description, it may be said that the plant is cultivated for the production of bhang all over Rajputana where irrigation is possible, and that, except in Jhallawar, Jaisalmir, and Jeypore, it is never sown in large patches, but appears as scattered plants in vegetable gardens.

Rajputana.

* Kotah.	Jhallawar.
Jeypore.	Kishengarh.
Bikanir.	Kerowli.
Alwar.	Dholpur.
Serohi.	Jaisalmir.
Jodhpur.	Bundi.
Shahpura.	Tonk.

Central India.

Extent of cultivation in Indore.

142. The information from the Central India Agency is scanty. The return from the Indore State shows that from 1873-74 to 1878-79 the area of cultivation exceeded 300 bighas. It then fell suddenly to below 100 bighas, and never reached that figure again until 1888-89. The average of that and the following four years is 180 bighas ($\frac{5}{8}$ acre). The cultivation has during this period been about stationary. It is confined to the few mahals in the Nemad district bordering on the Narbada, and to a small tract north of Indore. The State puts no restriction on the cultivation whatever.

Extent of cultivation in Gwalior.

143. Enquiry made by the Commission shows that in the Antri pargana of the Gwalior State the cultivation amounts to 265 bighas, and that there is cultivation in other parts of the State as well, extensive in Ujjain and Sipri. The average rent of land fit for the growth of hemp is Rs. 5 per bigha, and an additional tax of Rs. 6 per bigha is levied on the cultivation. There seems to be no other restriction on the cultivation, which has a slight tendency to increase. It is stated in a report attached

to the North-Western Provinces memorandum that ganja is grown in three tahsils of the Gwalior State—Antri, Sipri, and Kalaras,—and that the areas cultivated last season were respectively 250 bighas, 253 bighas, and 300 bighas, a bigha being one-half of an acre. The total comes to about 400 acres.

Extent of cultivation in Dewas and other States.

144. In Dewas the cultivation for ganja amounts to 39 bighas and for bhang to 9 bighas. In Baghelkhand and Bhopawar the cultivation is reported to be limited; in the latter division it serves for home consumption only. Dr. Caldecott, Agency Surgeon, Western Malwa, states that cultivation occurs all over Malwa, *i.e.*, the south-western portion of the Central India Agency, for the production of charas, bhang, and ganja, and that it is commonly grown along with tobacco. The reference to charas suggests that this wide statement must be accepted with caution, for charas is certainly a rare product in these parts.

No extensive cultivation in other States.

145. In the correspondence of the last few years relating to the production of the hemp drugs and in Dr. Watt's dictionary, the cultivation of Indore and Gwalior is more prominently mentioned than that of other States. It may be inferred that in comparison with the production of these States that of other States in Central India and Rajputana is unimportant, though it is possible that ganja may have been exported from Central India as the product of Indore and Gwalior when it was really cultivated in some other State. But this does not appear likely. It is probable that the production of other States is not much more than enough to supply local wants. But in the Central Provinces evidence from the Saugor district mention is made of smuggling from the Central India States. The Excise Commissioner of the Central Provinces also writes (in his memorandum) that in one village of the Panna State ganja is freely grown, and that it is also grown in Rewah. The cultivation in Rewah is also mentioned by witnesses from the North-Western Provinces, the Joint Magistrate of Jhansi (32), and a mafidar of Banda (215). Besides Rewah, the states of Panna, Chattarpur, Ajaigarh, and Charkhari are indicated. Mr. Wall, Excise Commissioner of the North-Western Provinces, stated in his report No. 273-E., dated 22nd November 1883, that the Jhansi and Lalitpur districts drew their supply of bhang from the Native States of Dattia, Tehri, Gwalior, and Chattarpur. But there is not sufficient information to enable any estimate to be formed of the extent of cultivation in any but the States for which figures have been given. There is neither report nor evidence regarding the important State of Bhopal on this point.

Ascertained area of regular cultivation.

146. The area of regular cultivation ascertained with some certainty is therefore—Gwalior 400, Indore 115, Dewas 25: total 540 acres. In the other States there may be small areas of regular cultivation, but the most of it is probably scattered and of the desultory sort, a few plants here and there in fields, gardens, and home enclosures.

Baroda.

147. The Baroda report states that "it is said that this plant was sown largely in various places. But the restriction placed by the British Government on exportation obliged the cultivators to give up cultivation. It is now cultivated in one village,

Bhadran, where bhang is made for home consumption. No narcotic hemp is cultivated either for the production of charas or its flowers or seeds." The area is about 10 to 12 bighas. It is also found in the compounds of sadhus, fakirs, and other people who consume ganja or bhang. There is no reason to suppose that this latter kind of cultivation is very common.

Kashmir.

148. The Governor of Kashmir and Jammu and the Member of Kashmir State Council report that the plant is not cultivated. It appears that the wild growth is abundant enough, and develops the narcotic properties in sufficient degree to satisfy the wants of the people.

Nepal.

149. The answers to questions received from the Nepal State through the Resident, while alleging that no one cultivates ganja, describe how the wild plant is nurtured and treated, sometimes, it would appear, after being transplanted. This treatment is said to require special skill (questions 2 and 10), and the inference is that the industry is not followed by any large number of persons. The Bengal evidence shows that Nepal charas used formerly to be consumed in that province, but has now given way to that from the Punjab. But it is reported from the North-Western Provinces that 25 to 50 maunds are still imported into Lucknow. It would seem, therefore, that the industry is not inconsiderable. In Royle's *Fibrous Plants of India* will be found quoted a report from Mr. Hodgson, which shows that in the northern districts of Nepal the plant is pretty extensively grown for fibre.

Summary.

150. The following table shows the total area of hemp cultivation in India as far as it has been possible to state definite figures:—

Extent either ascertained or estimated of cultivation in the various Provinces and States.

Province or State.	Area in acres.	For what product.	REMARKS.
Bengal	824	Ganja ...	Average, five years.
North-Western Provinces—			
Farakhabad and Hardoi ...	190	Bhang ...	Average, do.
British Kumaon and Garhwal	830	Fibre ...	Reported.
Punjab	100	Bhang ...	Reported.
Central Provinces	950	Ganja ...	Average, ten years.
Madras	350	Do. ...	Reported.
Bombay—			
British Territory... ...	1,000	Do.	Average, five years.
Native States	157	Do.	Reported.
Sind and Khairpur	345	Bhang ...	Average, five years.
Berar	58	Ganja ...	Average, do.
Ajmere	5	Bhang ...	Estimated.
Hyderabad	350	Ganja ...	Estimated.
Rajutana—			
Jhallawar	30	Bhang ...	Reported.
Jaisalmir	10	Do.	Reported.
Shahpura	25	Do.	Reported.
Central India—			
Indore	112	Ganja ...	Average, five years.
Gwalior	400	Do.	Reported.
Dewas	25	Do.	Reported.
Baroda	8	Bhang ...	Reported.
Total ...	5,769		

The only cultivation of any moment which has been omitted is that of those States in Rajputana and Central India which have not been mentioned in the table, and the irregular kind of cultivation which is carried on in the Madras Presidency, the Garhjat States of Bengal, and the plains of the North-Western Provinces. There is also a considerable area of fibre cultivation in the Native States and British territory in the Himalayas which has not been taken into account, and probably amounts to some hundreds of acres. Deducting the fibre cultivation, which yields but little of the drugs, from the total area given in the table, and making allowance for the narcotic cultivation which has been omitted, the total area of cultivation in India for the drugs can hardly exceed 6,000 acres. The total Himalayan cultivation for fibre of the Punjab and North-Western Provinces in the region extending from the borders of Nepal to those of Kashmir may be taken on a liberal estimate at nearly double that of Kumaon and British Garhwal, or 1,500 acres. It cannot be said that the regular cultivation either of the mountains or the plains is shown to be increasing or decreasing. In British territory the desultory kind of cultivation has either been suppressed, as in Bengal, Assam, the Central Provinces, and Berar, or has disappeared, as in Bombay, or is being abandoned as in Madras, the North-Western Provinces, and the Punjab.

CHAPTER V.

METHODS OF CULTIVATION AND MATTERS CONNECTED THEREWITH.

Definition of the narcotic products of the hemp plant.

151. Before describing the cultivation of the hemp plant, it will be proper to mention the products which are got from it. It has been shown that the plant which yields the true hemp fibre is the same as that which produces the narcotics. The seed is the familiar hemp seed which is given to cage birds. It is also occasionally eaten by the natives of India, especially in the Himalayas, and an useful oil is expressed from it. The fibre and seeds only come incidentally within the scope of the present inquiry. The narcotic products of the plant are ganja, charas, and bhang. Dr. Prain has described very fully the physiological processes by which the narcotic principle is secreted in the various parts of the plant. For the purposes of the Commission it is sufficient to state plainly and briefly what the three articles are in the simple forms in which they first enter the market. The definitions with which the Commission's list of questions is introduced are as follows. They are borrowed from Dr. Prain :—

"Ganja consists of the dried flowering tops of cultivated female hemp plants which have become coated with resin in consequence of having been unable to set seeds freely."

"Charas is the name applied to the resinous matter which forms the active principle when collected separately."

"Siddhi, bhang, subzi, or patti are different names applied to the dry leaves of the hemp plant, whether male or female, and whether cultivated or uncultivated."

These definitions have been generally accepted by the witnesses, but the result of the inquiries is to show that they require some explanation. First, with regard to ganja.

Ganja may be got from the wild as well as the cultivated plant.

152. Over nearly the whole of India distinction is recognised between the ganja and the bhang plant. Though the natives may mistake the sexes, it is clear that the female plant is the one which is called ganja and the male plant bhang. The plants are distinguishable even in the wild state, the loose flowering panicle of the male from the comparatively stiff and apparently blossomless spike of the female. The hill ganja of Assam, and the wild ganja that seems to be occasionally found and used throughout Eastern Bengal and the Sub-Himalayan region, and even in Kashmir, must be the female flower spike which has often been quite innocent of any tending. In examining the evidence, therefore, the definition of ganja given above must often be read as with the word *cultivated* omitted.

The drug bhang often consists of ganja.

153. Then as regards bhang, the witnesses often use the word to include the female flower head as well as the leaves of the plant, and the green leaves as well as the dry. The male flower head must also enter into it in consequence of the rude method of preparing the drug, *viz.*, by drying the plants and beating out the leaves. But the male flowers are not more narcotic than the leaves; the point to be noted is the inclusion of the female flower head in bhang. The confusion arises from the name of the product bhang being used also for the liquid form in which the hemp drugs are consumed. Ganja pounded up and made into drink becomes bhang. This is the way in which Garhjat ganja is used at Puri. In the west and south of India the distinction between the products bhang and ganja is frequently

lost. Bhang is cultivated in Sind with similar precautions to prevent the fertilization of the female plant as in Bengal, and the product is called nothing but bhang, and is rarely used for anything but concocting drink and sweetmeats, the smoking ganja being imported. Bhang is the ancient name of the plant. It is also the name of the form of narcotic product which was earliest discovered, for it must have taken time to learn the art of isolating the female plant and so producing ganja. Bhang is also the name of the most simple style of consumption, *viz.*, by pounding and drinking, which must have preceded smoking. Naturally, therefore, bhang is a more comprehensive term than ganja, and often includes it, especially where the production of ganja has not become a recognised industry. In the Madras Presidency ganja is the more general term, so much so that in some places the word bhang is hardly understood. This is probably due to the hemp plant being only known to the people as cultivated for the production of ganja.

Charas is not always the simple resin.

154. Charas may not always be the pure resinous matter. It generally contains leaf dust and other impurities picked up in the process of manufacture. But it is hardly ever confounded with ganja or bhang. Its appearance, that of dark green or brown paste, is distinct from that of both the other drugs. In Kashmir and the Punjab only is the name ganja sometimes applied to charas, probably because charas is prepared from the female or ganja plant (Governor of Kashmir). There is reason to think that in some parts of Rajputana the distinction between charas and ganja is not very strictly observed, and that the former name is occasionally given to the latter drug.

Bengal.

155. In Bengal the hemp plant is grown solely for the production of ganja in the area of regular and licensed cultivation. The illicit cultivation which is to be found in insignificant quantity all over the province, and the character of which has been described, yields for the most part bhang and not ganja fit for smoking. Ganja of inferior quality is produced in the Tributary States of Orissa in considerable quantity. In the Tributary States of the Chota Nagpur Division ganja of the same quality is produced, but in less quantity. The cultivated product of Hill Tippera appears to be still lower in the scale as regards quality, and very little in quantity. It is proposed now to describe the skilled cultivation of the Ganja Mahal, where the agricultural processes for the growth and preparation of ganja have undoubtedly been brought to greater perfection than in any other part of India, and, as far as information will allow, the more homely practices prevailing outside that tract. Babu Hem Chunder Kerr's report contains a detailed account of the Rajshahi cultivation ; Dr. Prain has given a brief outline of the mode of culture ; and Mr. Price, Collector of the district of Rajshahi, has submitted a sketch of the cultivators' business during each month of the year. Babu Hem Chunder Kerr's report is the basis of the information furnished by most witnesses. Endeavour will be made to compile a succinct account from these materials.

Regular cultivation of the Ganja Mahal : Preparation of the field.

156. Hemp is an exhausting crop, and requires a light, well-drained soil. It appears that there is but a limited quantity of thoroughly suitable ground in the Ganja Mahal, and that there is a tendency to abandon the outlying lands and concentrate the

cultivation about Naogaon. The ganja plant is reared in a seed bed or nursery and planted out into the field. The field is selected between January and the middle of March, and must be one which has lain fallow, or has borne nothing but light crops, such as pulses or mustard, during the two previous years. It must not be overshadowed by trees. It is first ploughed to remove weeds and stubble as thoroughly as the cultivators' means will allow. In April and May the field is liberally dressed with fresh surface earth from surrounding lands, the quantity used depending on the quality of the field. The turf and weeds on the sides of the field are next dug up in clods and thrown on to the field, the holes thus made being filled up with earth from the ditches. The field is thus cleaned to its extreme boundaries, and the weeds utilised as dressing for the land. In this process a small bank about nine inches high is raised round the field. The fresh earth added to the field becomes desiccated in a week or so, and then cow-dung manure is added and the field well ploughed again. From this time till September ploughing, followed by harrowing with the bamboo ladder, is carried out from time to time, the belief being, as Babu Hem Chunder Kerr says, that the oftener the land is ploughed the better is the crop. A channel is made to keep the field well drained.

The nursery conditions requisite to the germination of seed and growth of seedlings.

157. The details given by Babu Hem Chunder Kerr regarding the selection of the seed bed have special interest in connection with the subject of the spontaneous growth. He writes : " A plot of land near the homestead of the cultivator is generally made available for a nursery, and the people in order to make themselves sure of its dryness always make a point of using those lands only in which a tuberous-rooted, grass-like vegetable called *matha* (*Cyperus rotundus*, L.) grows. The growth of *matha* is, in their opinion, a sure sign of the land being quite dry." In another place Babu Hem Chunder Kerr says: "The nursery or seed bed consists of a plot of high, light, sandy loam." The selection of this plot is made in May, and as soon as one or two showers have fallen it is ploughed. The ploughing is repeated three or four times each month till August. The object is complete pulverisation of the soil, and, if necessary, the bamboo ladder in addition to the plough is passed over the land for this purpose. Manure is not used, and the land must be quite free of shade of any kind. The seeds are sown broadcast on a fine day after a ploughing, and the sowing is followed by harrowing to cover the seed. The bed is carefully drained. The following remarks from Babu Hem Chunder Kerr's report are quoted to show certain idiosyncrasies of the plant for the same reason that the previous *verbatim* extracts were made: " Seeds are not sown on either a rainy or even a cloudy day when rain is apprehended, as the wet ground rots them. Even if it rains three or four days after the seeds have been sown, most of the seeds are destroyed, as the earth gets hardened into a cake after the rain, and the germs cannot force their way through it. In such a case fresh seed has to be sown in another nursery again............ Nor is the grass weeded out at any time after the sowing of the seeds. They are also never irrigated. The cultivators are of opinion that the growth of grass in the seed beds is beneficial to the young plants, inasmuch as it protects the latter from the action of the wind."

Transplanting.

158. Towards the end of August or beginning of September the field is again dressed with cow-dung, refuse, and house-sweepings. About a week or ten days after this comes the day

for planting out. The field is ploughed and harrowed, and made into ridges "well smoothed and beaten down with the hand," and the seedlings are planted out. All this is done on the one day for fear that the soil which has been so thoroughly pulverised should get too dry.

The seedlings prefer high and dry soil.

159. It is necessary to again quote *verbatim* from Babu Hem Chunder Kerr for the same reason as before : "The number of ploughings is regulated by the nature of the soil, *khear* or clayey lands, in which hemp is occasionally grown, requiring more frequent ploughing than fields of *poli* soil or light, sandy loam, which form the majority of the ganja beds. The seedlings at the time of transplantation are from four to five weeks old and from six to twelve inches high. The smaller ones are collected for higher and drier fields, in which they are enabled to throw out their roots much quicker and easier, and grow up much faster than in low fields, the soil of which is somewhat heavy owing to the existence in it of a greater amount of moisture, which retards the growth of very tender plants................ If rain falls within three or four days after the transplantation, it proves injurious to the young plants, the roots of which, not having taken any hold upon the soil, rot and die away."

Treatment of crop between planting out and removal of the males.

160. The operations of the next few weeks are thus described by Dr. Prain : "A month or so after transplantation, about the middle of October, the fields are carefully weeded; a fortnight later, beginning of November, the ridges are hoed down as far as is possible without injuring the roots of the hemp, which are then well manured with oil-cake, or a mixture of cake and cow-dung, and the ridges rebuilt over the manure. About the middle of November the plants are trimmed by the removal of the lower branches; this helps to give the plant the pyramidal shape that ensures the flowering tops being as close together as possible, obviates the formation of ganja close to the ground, where it would certainly get covered with sand and mud, and finally admits of another course of ploughing and harrowing with a narrow ladder between the ridges; this course immediately follows the trimming, and is itself followed by a second course of manuring with powdered cow-dung and oil-cake, after which the ridges are again rebuilt."

The elimination of the males.

161. At about this stage the detection and removal of the male plants is begun. An expert is required for the work, either the professional *poddar* or *parakhdar* or the cultivator himself if he has acquired the necessary skill in distinguishing the male from the female plants. The exact differences by which the plants are distinguished by the experts cannot be described with confidence. The operation takes place before the flowers are developed; and Babu Hem Chunder Kerr says that the inspection is invariably made in the morning so as to have a good light, which shows how fine these differences must be. The *poddar* breaks over the plants which he decides to be male, the cultivator plucks them out, and fills the blank spaces with plants from the parts of the field where they are left in greater number. Then follows the first irrigation, which is regulated so as to moisten the ridges, but leave no water standing in the furrows. The *poddar's* visit may be repeated two or three times, and the field may be irrigated from three to six times in the following few

weeks. The cultivator himself is always on the look-out to detect and remove male plants which may have been overlooked at the regular inspections. Between the first and second irrigations the ridges are hoed and the field manured a third time.

Maturing of the crop and detection of abnormal females.

162. Babu Hem Chunder Kerr states that the male plant begins to flower in November and the female plant in the beginning of January, and Dr. Prain adds that from the time the latter flowering begins "the cultivator is on the outlook for those abnormal male flowers on his female plants which the *poddar* could not possibly have foretold." The ganja begins to ripen about the middle of February, "the state of maturity being indicated by a brownish appearance and the falling off of all the larger leaves." The Commission visited Naogaon on the 16th February, when the harvest was in full swing.

The Bengal cultivator misnames the sexes.

163. There are one or two matters in which the ways of the Bengal cultivator are different from those of the people of other provinces. They talk of the ganja-bearing plant as the male and the pollen-bearing plant as the female. In the Central Provinces and the west of India the cultivator seems to have learnt more of the principles of fructification in plants, and generally calls them by their true sexes. The existence of the *khasia* (emasculated) plant, which Babu Hem Chunder Kerr calls hermaphrodite, and Dr. Prain describes as "functionally defective," "useless but innocent," and "collated, as its name implies, with the sex to which it really belongs," has apparently no parallel at Khandwa in the Central Provinces. The plant is left standing at harvest, or rejected from the heap if it has been gathered by mistake. The Bengal cultivator does not grow a crop specially for seed as is done at Khandwa. He uses the grains that fall from his ganja in the processes of manufacture, which are very numerous, notwithstanding all the pains that have been taken to eradicate the male plants.

The khasia plant not discovered outside Bengal.

The Bengal cultivator does not grow a seed-crop.

Cultivation not confined to any class.

164. The cultivation of hemp in the Ganja Mahal is a practice that is handed down from father to son in common with so many arts and industries in this country. Beyond this the industry cannot be said to be confined to a class. Musalmans very largely preponderate among the cultivators in about the proportion of 7 to 2 according to Mr. Price. There is no evidence that the occupation is held in contempt, a point which Dr. Prain has discussed at pages 47 and 48 of his report. Babu Hem Chunder Kerr entered fully into the details of cost of cultivation and the profits of the cultivator. He estimated the former at Rs. 50 to Rs. 60 and the latter at Rs. 25 to Rs. 50 per bigha. There is no equally good information of more recent date. Ganja ranks as one of the superior crops.

Rain damages the crop when it is maturing.

165. Babu Hem Chunder Kerr notices a fact which appears repeatedly in the evidence from all provinces that "when the plants begin to flower in clusters and the resinous matter is formed, rain spoils the ganja." The quantity and superiority of Central Asian charas is said to be due to the dryness of the climate in that region. This is a point of considerable interest as a possible explanation of the inferiority of the drug when cultivated in the rainy season. There is no evidence of cultivation

in the Darjeeling district for fibre. From the evidence relating to other parts of the Himalayas, it is improbable that such cultivation does not exist.

Irregular cultivation. It may yield ganja, but probably does not often do so.

166. Though there is not any great amount of illicit cultivation, it will be interesting to note the information furnished by reports and evidence as to the methods employed in it. Mr. Basu, Assistant to the Director of Land Records and Agriculture, reports that he observed signs of the spontaneous growth where it was not plentiful being looked after with some degree of care. Talking of Bhagalpur and Purnea, he says: "As a rule the people of these districts could not distinguish between male and female plants, the leaves of both being used as a bhang; but one man pointed out to me a plant which was a female, and said that this class of plants produced the best drug. It is not uncommon to see a few selected plants, mostly females, left on the ground; these acquire a more bushy appearance not unlike that of the ganja-bearing plant. All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow." This would lead to the belief that the secret cultivator not unfrequently succeeds in producing smokable ganja. An Excise Deputy Collector describes one method by which the plant is not only concealed from view, but which may result in effectually secluding the female plant. When the plant is a foot high, an inverted earthen pot is placed over it supported by pegs fixed in the ground. The confined growth takes the form of a cabbage-flower (*sic*), and would in all probability retain the resin in more than common quantity. A Burmese witness has described a similar method as being the regular practice in the Shan States. The Registrar of Calcutta (98), enquiring from fakirs and religious mendicants, learns that the wild plant is made to produce ganja for smoking by lightly rolling the flower spikes of the growing plants between the hands, thereby causing the component parts of the spike to stick together, and preventing the access of the pollen. "This treatment, repeated several times, converts the spikes into what is commonly called *jata*, which gives the matted appearance to the article." Witness (53) states that he has seen ganja plants cultivated illicitly from the twigs of which ganja as good in appearance as excise ganja can be prepared, but the flavour of it is alleged to be inferior. There is not in the evidence, however, any general confirmation of the supposition that the illicit cultivation produces the stronger form of the drug. The matter will be further examined in dealing with the preparation of the drugs.

There are not, however, sufficient grounds for supposing that the homestead cultivation or the fostering of the wild plant is carried on on any extensive scale. It is not often that either practice produces anything superior to bhang, and where there is an unlimited quantity of good bhang growing wild, there can be little inducement to illicit cultivation with its attendant risks. No information has been given of occupants ever being paid for allowing the bhang growing on their lands to be collected, and that incentive to fostering the plant appears to be wanting. It will be seen also that where the wild plant does not prevail, the licit consumption of ganja is comparatively small, and the consumers are therefore few.

Tributary Mahals.

167. The Tributary States of Orissa after the Ganja Mahal contain the most extensive and important cultivation in the Province of Bengal. This cultivation has never been made

the subject of detailed enquiry and report, and the information now given in answer to the Commission's questions is but scanty. It appears to be of the homestead sort, and limited to a few plants in each plot. The only suggestion offered that it is sometimes conducted on a larger scale comes from the Sub-divisional Officer of Jajpur in Cuttack (52), who says: "If the lands be small, the seeds are sown broadcast; if the lands be large, the seeds are first sown in a nursery plot." Mr. Wylly, Government Agent at Keonjhar, states that the plant is grown in seed beds in April and May and transplanted, which may be regarded as some confirmation of the above witness. If this fact is accepted, the evidence shows that the plants are raised in three ways—either accidentally sown, sown broadcast, or transplanted. At the beginning of the rainy season—that is, in June-July—the plants will be about a foot high, and standing in greater or less number in a plot near the homestead. The plant takes some five or six months to mature from the time it has reached this stage. Mr. Taylor (36), an officer who has served in Orissa since 1866, says that the plants are hoed and weeded, and the roots loosened and dressed with vegetable mould or well-rotted cowdung. Rai Nand Kissore Das, District Officer of Angul, states that the plants are watered when necessary. There is no evidence that the male plants are extirpated. Witness (63) does not speak positively on the point, but it would appear from the evidence of Mr. Wylly that some distinction is made in the treatment of plants of different sex. "The *male* plant," he says, doubtless meaning the *female*, "is emasculated by having its stem punctured or cut, and pieces of broken tile inserted in these cuts." That this process is in vogue is confirmed by Babu Manmohan Chakravarti, who does not, however, make any distinction of sex with reference to it. The plant is subjected to still another operation, which is mentioned by Rai Nand Kissore and Babu Manmohan Chakravarti, without any distinction of the sex of the plant, except that the female plant is indicated by the language used. The former says "nothing more than the twisting of the stem for the production of ganja is done;" the latter, "to prevent over-branching of the flower heads, they are roughly twisted." There is no more information of the treatment of the plant till it ripens and is gathered in December-January. This appears to be the season of growth notwithstanding that Babu Kanti Bhushan Sen makes it synchronous with the Rajshahi season. It cannot be correct, as he states that the plant grows spontaneously from the previous year's seed towards the close of the rainy season, for this is contrary to the habits of the hemp plant in the plains of Northern India, and the fact that the natural conditions at the close of the south-west monsoon do not seem to be favourable to the spontaneous germination of any kind of seed.

The female plants are twisted or mutilated.

168. The summary of the results of the inquiry made by Mr. Grimley in 1890 in the States of the Chota Nagpur Division gives a few details of the method of cultivation in that region. Unfortunately no question was directed to ascertaining the season of growth, and the information on this point is not, therefore, decisive. Sirguja reports that seeds are sown or plants grow during the rainy season. This agrees with the account from the Garhjat States as was to be expected. The practice of transplanting is mentioned from Udaipur. In the answers to the question whether the male plants are destroyed, the sexes are confounded, but it is clear that the general external differences are recognised. Bonai reports that those

Political States, Chota Nagpur.

Information derived from an inquiry made in 1890.

plants on which flowers grow are destroyed, and those on which the leaves become intertwined are preserved. The latter description clearly indicates the clustered spike of the female plant. Gangpur reports that the male plants (really female) which produce flowers and fruit are not destroyed, which may well imply that the others are. It may be inferred generally that the practice is not well established or systematically carried out. It is probably in the empirical stage described by Dr. Prain (page 12), and directed to the removal of a plant which is useless rather than mischievous; for Bonai says: "No one can distinguish which is the male or female plant." The answers show also that the male plant is very generally preserved for use as bhang, while the one with intertwined leaves is kept for ganja. The ground is ploughed and dressed, but not apparently treated in any special manner. The splitting of the stem with insertion of a potsherd and the twisting of the plants are practised; but it would appear from the Udaipur answer that the twisting is merely the means of splitting the stem. It is reported from Gangpur that cross incisions are made in the stem with a knife, and "something like opium or other intoxicating thing is put into it, and the interstice is then closed up with earth to increase the power of intoxication." It may be concluded that the method of cultivation does not differ from that in vogue in the Garhjat States.

Mutilation of the female plant.

169. No description is furnished of the cultivation in Hill Tippera, but a well informed witness classes it with that of the Garhjat States. It is not likely that it is more skilful or elaborate.

Hill Tippera.

170. There is no regular cultivation in Kuch Behar, and the homestead cultivation, if there is any, cannot be different from that of the surrounding British territory.

Kuch Behar.

171. There is no regular cultivation in Assam, and the evidence gives no information about the processes employed in the illicit and hill cultivation. Mr. Anderson states that the Miris of Lakhimpur hedge in the wild growth; Mr. Godfrey that the plant is weeded. The cultivators named are, besides the Miris of Lakhimpur, the Nagas of the Sibsagar frontier. Mr. Spicer mentions Kukis, Patnies, and a few coolies, and his evidence relates to the Cachar Valley. The hill tribes of the province and its frontiers may be included in the list, and the coolies generally. The drugs produced are bhang and very inferior ganja. The two things are practically the same.

Assam.

172. There are three classes of cultivation in this province—that carried on in the Himalayas for fibre and seeds with charas as a bye-product, the recognised cultivation of bhang in Farakhabad and Hardoi, and the desultory homestead cultivation which prevails to a greater or less extent everywhere in the plain country.

North-Western Provinces.

173. The first is well described by witness (49) and in the "Field and Garden Crops of the North-Western Provinces and Oudh" by Duthie and Fuller. Mr. Dharma Nand Joshi is Settlement Deputy Collector, Garhwal, and his account is probably based on personal inquiry and observation, and may therefore be quoted. The fields near houses are generally selected for hemp because they are better manured,

Cultivation in the Himalayas.

and the soil must be light. Early in June the field is cleaned of all rubbish which is burnt upon it. It is ploughed immediately after a good downfall of rain. In the beginning of July the seed is sown; and this must be done on a fine day, for the seed will not grow if sown in the wet. Chaff is then scattered over the field to protect the seed from the birds. In eight days the seed germinates, and fifteen days afterwards the crop is carefully hoed so that the plants are not injured. After another fortnight the field is weeded a second time. No other operation is described till September (Bhado), when the plants have grown up, and some have begun to bear seed. These are called "sujango." or "kalango" (according to Duthie "*gul* bhang"), and are the female plants. Some do not bear seed, and are called "phulango" (according to Duthie "*phul* bhang"), and they are the male plants. These latter are plucked up and laid in the sun for a few days to dry, and are then manufactured into fibre. The fibre from the male plant is superior. The female plants have meantime been growing up to a height of some ten feet, of which the upper third is full of leaf and seed. In (Kartik) November the female plants are cut down from the root, and spread in the sun for twenty-four hours to dry. The charas is then got from the plants by rubbing the heads between the hands. This description gives the female plant a life from germination to harvest of little more than four months. Duthie and Fuller put the sowing in May, and this gives a longer life, more nearly approaching the period of growth, about six or seven months, in the ganja tract of Bengal. The latter is probably the more correct.

Class of cultivators: Cultivation is not reputable.

174. Duthie and Fuller write that hemp growing is restricted to the lowest classes of cultivators, being considered beneath the dignity of the higher castes. So much is this the case that the phrase "May hemp be sown in thy house" is one of the commonest of abusive imprecations. Mr. Dharma Nand and other witnesses corroborate this account. The principal cultivators appear to be the Khasias or Tabhilas, a class of people above the Domes and below Rajputs in the social scale, who do not wear the sacred thread. If a Brahman or Rajput wishes to cultivate hemp, he engages a Khasia or Dome to work for him; but, after the crop is taken off, he has no prejudice against making charas or separating the fibres from the stalks. Dr. Prain (page 48) has traced the contempt in which the hemp cultivator is held to the original motive of the cultivation, *viz.*, the production of fibre, and points out that the cultivators of other fibres, such as *sann* (*Crotalaria*), are similarly regarded. Mr. Cockburn (34) confirms this explanation, suggesting that the offensiveness of the operation of rotting the stalks is the origin of the dislike. Unfortunately Mr. Dharma Nand from direct knowledge contradicts this, which might have been a reasonable solution of the question; for he says that the higher classes have no objection to this operation. The origin of the prejudice is probably to be sought in very early social institutions.

The seeds are, next after the fibre, the important part of the products of Himalayan cultivation. They are eaten, and yield oil. The seed of the uncultivated plant is very inferior in size, and is not therefore used for sowing.

The regular cultivation of bhang.

175. There is very little information about the methods employed in the regular cultivation of bhang in the districts of Farakhabad and Hardoi. The crop must be grown in fairly large plots or fields, for it is capable of being measured, and the Agricultural Department apparently keeps a record of the area. The seed would seem to be sown at

the same season as wheat and barley, and mixed in patches with these crops. It is harvested in May after the other crops have been taken off the ground. There is no evidence of the male plant being eradicated.

Secret cultivation.

176. The homestead or desultory cultivation for the production of ganjá seems to be carried on for the most part secretly. Mr. Bruce of Ghazipur, referring to his own district of course, states that the cultivation is not carried on openly, and it is therefore difficult to obtain any particulars about it; that the seed is sown broadcast in good soil, and the plants afterwards moved to some enclosed place, such as the courtyard of a house, and carefully tended; and that the female plants are used for ganja. Regarding the practice of eradicating the male plant, the evidence is not decisive, and what there is refers sometimes to the tending of wild growth, and sometimes to the more methodical cultivation. Thus Mr. Ferrard, Magistrate and Collector of Banda, referring to the spontaneous growth on the Gumti river, says that, in spite of close police supervision, "the people continue to keep some plants and leaves, and prepare drugs from them. In such cases the male and female plants are kept separate." He may be talking in this place of the drugs and not the growing plants, for he says further that he has been told that "the male plants are cut down when young and dried, and its leaves form bhang. Ganja is made from the female flower and petals when almost ripe. The plants can grow together until the period of fertilisation." Witness (48) has been told that the male plants are extirpated. On the other hand, the drug contractor of Moradabad (248) had never heard of the male plant being extirpated.

Cultivation for ganja in former days.

177. The information regarding bygone cultivation throws some light on the knowledge of the people and the practice in respect of the removal of the male plant. Witness (61) states that there was a good deal of cultivation formerly at Loohaisar, tahsil Fatehpur, in Barabanki, but it was forbidden. Witness (249), referring to the same cultivation, seems to say that it was grown in a tract called Mahadeva, and this must have yielded the ganja which other witnesses speak of as Mahadeva. Witness (61) gives some details of the methods then employed. The seed used to be sown with wheat and other crops, and when the plants had attained a little growth, the Kabariyas, and they only, were able to distinguish which were ganja and which bhang plants, *i.e.*, female and male respectively. The ganja plants were then transplanted to some suitable spot. He mentions also the practice of twisting the leaves (*sic*) to make the plant produce ganja.

Principal features of irregular cultivation.

178. It is not worth while discussing the evidence of individual witnesses further. It may be inferred from the whole that the distinction between the male and female plants is pretty widely known; that where the spontaneous growth is in small and manageable quantity, and where plants have been sown in suitable places, or transplanted into such places, the female plants often receive special care and have the males removed from among them; and that for the more desultory sort of cultivation it is not very material whether the seed is taken from the cultivated or wild growth, from ganja or from bhang.

Tehri Garhwal and Rampur.

179. There is no information of any methods in vogue in the States of Tehri Garhwal and Rampur different from those of the province generally.

Punjab.
Himalayan cultivation.

180. There is more or less evidence of cultivation of the hemp plant all over the Himalayan portion of the province, including the smaller Native States. The cultivation is in small patches. A report from Kulu in 1880 says: "Almost every house has a small patch near it, a long strip beside a hedge, or a small bed a few square yards long (*sic*) in area." The only other detail of cultivation furnished is that the season of growth is from April and May to October and November. It may be safely assumed that the method of cultivation does not materially differ from that practised in Kumaon, which has been fully described. Whether charas is produced to the same extent may be open to doubt, but the information on the point is defective.

Cultivation in the plains for bhang.

181. Though the extent of cultivation in the Punjab plains is not great, the details of the methods employed in it, which can be gathered from the evidence and papers, may be noted. A memorandum by Hari Chand, Assistant to the Commissioner of Excise, states that "people grow it in both harvests in the months of March and November. They cut plants for use in February and June." The latter named months appear to relate to the period within which the plant is gathered if it is sown with the late or *rabbi* crops. An account of the cultivation is furnished in the appendix of Mr. James Wilson's evidence as having been given him by his Excise Assistant, Mr. Kirthee Singh. The plant is reared for bhang only, never for ganja, and charas is not extracted except rarely for private consumption. The land is usually close to the village, and of the description called *niain*, the same as that described by Duthie and Fuller, when speaking of the Himalayan cultivation, which the daily offices of the villagers provide with a plentiful supply of manure. It is ploughed frequently in August and September, the seed is sown broadcast in the latter month, and the field is watered. The watering is repeated three or four times, and the crop is hoed now and then and kept clear of weeds. The crop is ready to cut in March and April. No distinction is made between male and female plants. The whole is cut and dried together, and the leaves, flowers, and small twigs are then shaken out and form bhang. The outturn is eight to ten maunds a bigha. A little charas is sometimes made by beating the flowering twigs over a piece of cloth laid on the ground. A greyish white powder falls on the cloth which is collected and dried.

A few details of the method of cultivation.

182. This account gives only one season of cultivation, but there are witnesses to corroborate the Assistant to the Commissioner of Excise as to the plants being grown with both the early and late crops, and other fragmentary information is furnished as to the processes employed. Witness (68) mentions the use of goat and sheep dung, and the advantage of sowing four or five seeds together when the plant is to be grown amongst tobacco or garden crops. This would be cold weather cultivation. He also mentions the broadcast sowing, and states that the product of the plants grown in *sailaba* lands is more intoxicating. Witness (26) states distinctly that there are two seasons for the cultivation, from *Kartik* to *Chait* (October-November to April-May), and *Baisakh* to *Sawan* (May to August); and he mentions two curious manures, the "excreta of a serpent" and "decayed swallow-wort." The cultivation is carried on in small plots, and only by the keepers of

takyas and *dharamsalas*, especially by Sikhs. Witness (74) states that transplanting is practised, and that the cultivators are the fakirs and keepers of *dharamsalas* and consumers generally. Witness (67) gives three seasons for cultivation, probably the times of sowing, October-November, February-March, and July-August, and states that the plant is sometimes manured after it has grown a foot or two high. Witness (19) gives the season of sowing as from October to January and the harvest time as March, and states that the crop is cultivated like other *chahi-hatri* crops on *chahi*, *hatri*, or *sailaba* lands. The crop is cut at night to prevent the loss of seed that would otherwise occur. But this witness has not seen the cultivation. Witness (36), Civil Surgeon of Jhang, a native gentleman, has made direct enquiries in his district. The male plant is, he says, extirpated in February and March, and the rest are gathered in April, the cultivators are of the ordinary class, but are in the employ of the fakir consumers, for whom they grow the drug. Witness (24), Excise Officer, states that the seed is sown in November at the same time as wheat. The field is well drained, cleaned, and manured. The bhang seed is soaked in cow's milk and water the night before sowing. It is sown broadcast. The crop is watered. In March-April the male plant called *kera*, which is smaller than the female and bears a flowery head, is eradicated. The female plants are cut with the wheat in May. The cultivators are for the most part fakirs, Hindus and Muhammadans, and the products are bhang and ganja. Mr. Dames (9), Deputy Commissioner of Dera Ghazi Khan, states that the land is well watered before sowing between the months of June and September. The seed is sown between October and January, and the crop gathered in March and the beginning of April. Frequent waterings are required, and the crop must be gathered in at night, or it looses much of its value. It may be concluded that the crop is generally grown in the *rabbi* season, though occasionally in the monsoon; that it requires high tilth, including a liberal supply of manure and irrigation; that transplantation and the extirpation of the male plant are sometimes practised; that the cultivation is for the most part carried on by consumers, of whom a very large proportion are fakirs and religious characters.

Punjab States.

183. The evidence from the Punjab States supplies nothing new regarding the cultivation. From Bahawalpur there is corroboration of Mr. Dames's statement that in the processes preceding the sowing of the seed the land is watered.

Central Provinces.

184. The cultivation of the Khandwa tahsil has been described by the Deputy Commissioner of Khandwa and the Excise Commissioner. These papers, with the Commission's notes, furnish materials for the following account.

The regular cultivation.

185. The average rainfall of the tract in which ganja is cultivated is 33 inches. The soils which are considered most suitable to the crop are—

Pandhar, or white soil—land near the village site which is largely mixed with ashes and sweepings from the village;

Mand—a light yellow alluvium pervious to moisture;

Kali—black soil or regur.

The first two are the best; the last is too stiff if the season happens to be very wet. The seed is specially cultivated in fields apart from the ganja, and in this the practice differs from that of Bengal, where the seeds which fall from the ganja in the process of preparation are kept for sowing. The seed of Dhakalgaon, a village in Indore territory, is considered the best, and fetches double the price of other seed. It gives a stouter and more branching plant than the local seed. The same fields are used year after year for hemp cultivation, and it is thought sufficient to manure heavily once in three years. Here again the practice differs essentially from that of Bengal, where the land will only grow hemp every three years, and heavy manuring is required each time it is sown. The manure used in Khandwa consists of household refuse, cow-dung, and ashes, and is given to the land at the rate of sixteen to twenty cartloads per acre. The crop is sown about fifteen days after the first good fall of the south-west monsoon, *i.e.*, in June or July. If the field is not under any crop, it is ploughed in January or February, and in any circumstances it is thoroughly worked up in April or May. The latter is the season for manuring if it is the turn of the field to be manured, and two ploughings and two applications of the *bakhar*—an instrument which serves the purpose of a harrow—are considered necessary between this time and the sowing. The seed is sown on a sunny day by means of a bamboo drill (*sarta*), which is used in combination with the *bakhar*. The seed germinates within a week, and in twenty days the plants have reached the height of about nine inches. The spaces between the furrows are then cleaned with the bullock hoe (*kolpa*), and between the plants in each row with the gardening hand-implement called *khurpi*, the plants being thinned out at the same time, so that they shall stand six or nine inches apart. The weeding process goes on for a month, and during it the lower leaves of the plants are removed. There is no transplantation at any time.

The detection and removal of male plants.

186. About six weeks after sowing the examination (*parakhai*) for eradication of male plants begins. The first plant to be detected and uprooted is the pure male called *naria* or *bhangra*. The cultivators recognise a variety of the male plant which they call *sheoria*, and this is treated like the *naria*. The male plant, either *bhangra* or *sheoria*, occasionally bears some female flowers, and is then called *adnaria*, with the addition of *bhangra* or *sheoria* according as it is supposed to belong to either variety. *Naria* of course means *male*, and *adnaria* *half-male*. It is to be noted that no mistake is made about the true sexes of the plant by the cultivators of Khandwa. So clearly do they understand the distinction that when asked the reason for removing the male plants, a cultivator replied by asking what would happen if a ram were let loose amongst a flock of ewes. The cultivators themselves undertake this eradication, and no specialist is required. But it is not done very perfectly, for when the Commission visited a ganja field on the 9th September male plants in full blossom were discovered without much difficulty. In September or October the field begins to be irrigated. It will be noted that the south-west monsoon has now nearly ceased, and that rain is henceforward harmful, as it washes off or otherwise dissipates the resin which has begun to accumulate in the female flower spikes. The crop ripens about the middle of November, maturity being indicated by a brownish appearance in the flower spikes.

The female plant with abnormal male blossoms.

187. The Commission inspected some fields in this month, and found that those in which the crop was pure ganja contained a number of plants which the cultivators called by the name of *moria*. These had generally at the ends of the branchlets composing the spikes one or two male blossoms. They are said to be deficient, though not wanting in resin. They are therefore regarded as inferior, but the Khandwa cultivator does not appear to recognise the mischief that they do in the ganja crop. He, however, attributes to them a specially noxious character in that their seed invariably produces plants of the same kind (*moria*). They are therefore ruthlessly eliminated from the seed field, while they are sometimes allowed to remain, as was seen, in the ganja field, and are in that case harvested with the good ganja (*mal*). These appear to be the plants referred to by Dr. Prain as those which "the *poddar* could not possibly have foretold," and which the Bengal cultivator roots out for himself after the *poddar's* visits have ceased. They do not appear to be, as Mr. Drake-Brockman supposes, the *khasia* plant of Bengal, but it is possible that the latter is included in them. The khasia form of the plant is not recognised by the Khandwa cultivator.

The seed crop.

188. The processes in cultivating the seed plant seem to be the same as those above described as regards preference of soil, manuring, and tilth. It may be mentioned, however, that irrigation is not invariably practised for either ganja or seed crops. In the case of the seed crop, plants bearing flowers of both sexes are as far as possible eliminated. The process is rational. The blameless female is the more likely to reproduce her own kind. The evidence gives no information of peculiar methods followed in the homestead cultivation. There is no special class of cultivators.

Tributary States.

189. There is no information of the methods of cultivation, if any still exists, in the Tributary States.

Madras.

190. Mr. Benson's bulletin describes in detail the methods of cultivation in the two regions where alone ganja is supposed to be regularly cultivated in the Madras Presidency. The methods differ, and it is necessary to deal with them separately.

Regular cultivation in North Arcot.

191. In the Javadi Hills of the North Arcot district the cultivation is carried on by the Malayalis. These people "claim to alone possess the knowledge necessary for the manufacture of ganja, a practice which has been carried on, they state, in these hills from time immemorial." There being no considerable level areas, though the ground is to a certain extent terraced, the crop is sown in small plots. "The soil is free, friable, and open, derived directly from the rocks on which it rests, thoroughly well drained, and appears to be fairly fertile." It grows the ordinary dry food-grains of the country, and the hemp alternates with them. A heavy dressing of cattle dung is absolutely necessary, and this is given in May or June before the rains begin. When the ground has been sufficiently moistened to allow of ploughing, it is broken up, and the ploughing is repeated three or four times until July. The seed is then sown in furrows, opened with the plough three feet apart, and covered in with the feet. The seeds germinate in about a week, and are allowed to grow for three weeks, when they are thinned out. In

the meantime the field is kept clean by ploughing between the rows and weeding. When about a foot high, the plants are earthed up by means of the plough. When the crop is four months old, the males—called female by these raiyats—are eradicated. This process goes on continuously as the males betray their presence, but is never quite successful, as a certain amount of seed always sets. The harvest begins in January and continues up to March, ripeness being indicated by leaves and flower heads turning yellow and the former beginning to drop. The crop is never cut on a damp or cloudy day.

Regular cultivation in the Kistna district.

192. The other tract of cultivation is in the Kistna district; the only village which has any considerable area is Daggupad, near the borders of Nellore, and about fifteen miles from the sea. It is a wide open plain, the soil being a stiff black loam with a considerable admixture of *kankar*. The lands devoted to hemp are sometimes near the village, sometimes at a distance, but always reasonably accessible. The crop is sometimes cultivated and handled by the raiyat himself, but more frequently he supplies only the cattle labour, and the rest is done by others, chiefly Muhammadans, of whom there are many in the village. The crop usually follows millets, dry rice, coriander, tobacco, indigo, or chillies, but sometimes hemp is grown in successive years. In the last case heavy manuring is necessary. This is supplied by folding sheep upon the field or carrying cattle manure to it. The land is ploughed about three times between July and October, and finally worked with a three-tined grubber (*gorra*, or seed drill used without its seed hopper and tubes). It is then marked off in two feet squares with a marker similar to the *gantaka*, or scuttle worked without its share. At the angles of the squares four or five plants are dibbled in with a stick, and watered to set them.

The nursery.

193. The seed-bed is usually made on the dam of a tank, and is about six feet wide by sixty feet long. It is dug up with a crowbar, reduced to a fine tilth, and levelled. In August the seed is scattered upon it and covered up by hand, and the bed is hand-watered as often as necessary for the next two months. When the plants are two feet high they are topped off, and in a few days they put out numerous side branches, and are then transplanted into the field. This takes place in October. A month after planting the fields are hand-weeded, and about a fortnight later a plough is run between the rows, and the plants are thereby slightly earthed up. Flowering begins two months after planting out, and the male plants are removed. Here, as in Bengal, the male plants are called female. These plants are cut down at the root and thrown away, and the process goes on as long as male plants are detected. The harvesting begins in February and goes on into March. Nothing is said of the employment of professional *parakhdars* in either tract. And in neither does irrigation appear to be practised beyond the extent abovementioned in the Kistna cultivation.

Irregular and homestead cultivation.

194. The evidence, as far as it relates to the regular cultivation of the tracts described above, does not add anything to this information. But details more or less interesting and some curious are furnished regarding the stray cultivation. Mr. Morgan, Deputy Conservator of Forests, says of the surreptitious cultivation in forests that the seed is scattered in old cattle kraals, and the plants thinned out to enable them to branch, the males being extirpated. A Cuddapah witness (121) states that the plants are moved from a seed-bed and planted out over the fields,

after which they are carefully tended, the big leaves being removed, the trunks twisted, and the plants themselves manured. Another witness from the same district (57) mentions watering and the extirpation of the males. And yet another (134) alleges that the best sorts of ganja are produced by planting the seed or seedling—it is not clear which—in the mouth of a dead dog which has been buried in a suitable position, and by splitting the stem and binding up opium or arsenic in the cleft. The practices of splitting the stem and inserting a potsherd and of twisting the stems are mentioned by so many witnesses that there can be little doubt they are more or less in vogue. The statement that opium is inserted in the stem is also not uncommon; but the rare evidence that arsenic and assafœtida are so used must be classed with that relating to the dead dog, to the use as manure of fowls' and pigeons' dung, of serpents' heads, of debris of dead snakes, of *Ptychotis fructus*, and of water made dirty by washing fish, and the getting plants poisoned by cobras. These aids to cultivation are some of them not generally known and others not easily procurable, and do not deserve much attention. The point to be noted is that even in the desultory cultivation of the garden, the homestead, and the field, the practice of isolating the female plant is not uncommon, and results in the production of the stronger and more valuable form of the narcotic, *viz.*, ganja. The evidence seems to show beyond doubt that the knowledge of this process is very widespread, extending over the whole Presidency from the hill tracts of Ganjam to the Wynaad. It may also be mentioned as affording facility for cultivation that in the climate of the Madras Presidency the plant requires but little artificial watering. When it has once taken root, the rainfall suffices for it ordinarily. The homestead cultivation is not carried on by any special class except in so far as religious devotees, Hindu and Muhammadan, very commonly engage in it, and it may be said that the cultivators are frequently consumers of the drugs.

Madras States.

195. There is no information about the mode of cultivation in the Madras States, except that from Travancore, regarding the stray (and clandestine) cultivation by the Kanikars or hillmen, mendicants and Musalmans. It is said that the seed either of the imported ganja or of locally grown plants is sown thickly in loose soil. The seedlings are in due time planted out six feet apart. "The *chada* ganja grows denser and shorter than the other variety," presumably the male. "It thrives best in rich loam or alluvial soil. It requires no special manure, but it is believed that the decomposed bodies of snakes, particularly of serpents, is the most efficacious manure. Some even go the length of thinking that there is a special advantage in dropping the seeds into the mouths of serpents killed and planting the thing whole. Excessive rain, it appears, is injurious to ganja. The plant flowers in about ten months from date of planting." The hillmen are those who engage in this cultivation most, but it does not seem to be common. The processes already described for the Presidency in the desultory cultivation are doubtless those employed for similar cultivation in the other States.

Bombay.

Soil preferred, and season of sowing.

196. The cultivation, it has been seen, is almost wholly confined to the Central Division of the Bombay Presidency, and a few small Native States in the Deccan and Southern Maratha Country. The method of cultivation in this region has been described by many witnesses, and it proceeds on one system through-

out. There is some discrepancy as to the nature of the soil which is most favourable to the crop. The preponderance of evidence is in favour of the lighter mixed soils, and not of the richest and heaviest black soil. Mr. Ebden, Collector of Ahmednagar, gives the following description of it : "When grown for ganja the plant requires a rich friable soil, and land near a village site is often selected on account of the manure with which native habits supply it. Irrigation being necessary in case of insufficient rain, *bagait* land is preferred. When the plant is grown for seed or for the manufacture of bhang only irrigation is not essential, and in ordinary seasons any good *jirait* land will do." It is principally in Satara that the richest lands are said to be preferred, but in the ganja-growing tract of that district they are probably not the adhesive clay which is the consistency of the best black soils in the Deccan. Rotation is necessary; good crops of hemp cannot be got off the same land in successive years. The field is thoroughly worked up for some month or two before the south-west monsoon, and is heavily manured, sometimes by folding sheep upon it. In Khandesh the seed is sown in the very commencement of the rainy season, *i.e.*, early in June, the *munga nakshatra*. Further south it is put in later, *viz.*, in the *Punarvasa* and *Pushya nakshatras*, which correspond with July-August. The seed generally preferred is that from Ahmednagar.

Sowing and treatment of the crop.

197. The agricultural processes are the same everywhere. The seed is sown with a single drill, the other pipes of the ordinary triple drill being closed if that implement is used. The lines are from one-and a-half to two feet apart. The seed springs up within a week, and the plants are allowed to grow till they are about one foot high, the field being kept scrupulously clean meanwhile by the cattle hoe and hand weeding. The rows are now thinned out where they are too crowded, and the lower branches are removed to force up the growth of the tops of the plants. The weeding with the cattle hoe earths up the rows in some degree. In about six weeks from the sowing the plants have reached a height of two feet. The *parakhai* or *parakadar* is then called in. Witness (47), Superintendent, Office of Survey Commissioner, and Director of Land Record and Agriculture, says that the ganja cultivators of the Poona district are skilled in distinguishing the male plants. Everywhere else the *parakhai*, or examination for male plant, is done by an expert, who is paid at the rate of Rs. 8 to Rs. 10, or even more, a month. The plants are at the same time thinned out where necessary to allow of lateral growth. The witness just quoted also states that the female plants are bruised by giving them a half twist a few inches above the root to induce this lateral growth. This process is not described by any other witness. Mr. Ebden, however, furnishes the interesting information that it is part of the *parakhai's* business to search the country round if he finds symptoms of mischief caused by "pernicious plants." He also says that in the seed field the *parakhai* is not required. But this may be doubted, for Mr. Kennedy (54), Superintendent of Police, has learnt that the female (*sic*) plant is eliminated from the seed field, from which it would appear that some extermination of plants is practised here also. Probably attention is directed, as in the seed field of Khandwa, to the eradication of the bi-sexual plants of all kinds.

Male and female plants and their different forms.

198. The educated witnesses who have supplied the information before the Commission understand clearly enough the broad distinction between the male and female plants and their

functions, but the cultivators seem to be very hazy on the subject (Mr. Ebden). In spite of the fact that one or two of the names applied to the various undesirable plants which the *parakhai* casts out show a correct understanding of the reason why they are mischievous, these names without distinction are given by two witnesses as names of diseases, and it is probable that the plants indicated are popularly regarded as diseased plants. Yet it is difficult to believe that there should be so wide a gulf between this ignorance and the intelligence found in the Central Provinces among people of the same race and occupation, and not separated from the Bombay cultivators by any great distance as distances go in India. The forms of the plant, noxious from the point of view of the ganja grower, which have received special names, are given below, with the explanations of the witnesses regarding them in brief. These explanations are evidently gathered from informants, and are not based on the witnesses' own observations, except in the case of Mr. Ebden.

Andya (*36*), *Andia* (*30*).—Indicated by the "pin-like white flowers" (36); by organic molecules formed in the top of the plants; affects plants in the beginning of their growth, and lasts about a month (30).

Remark.—Apparently the simple male.

Bhangira (*48*), *Dhatura* (*5*).—Plant examined by Mr. Ebden, who says: "Latter name identical with that of the common poisonous plant," and pronounced male.

Remark.—The simple male.

Shevarya (*36*), *Sheora* (*30*), *Shewara* (*5*).—One of the branches grows higher, and bends down with a flower like jawari grain at the end of it (36). White flowers grow on the flower top (30). Mr. Ebden has not seen specimen.

Remark.—A form of the male plant known by the same name at Khandwa.

Haldya (*36*), *Haldia* (*30*).—Recognised by a yellow shoot at one of the knots of the plant (36). Affects the plant by producing a yellow colour in the tops, and lasts till the full growth of the plant (30).

Remark.—The yellow colour may be caused by deposit of pollen.

Kapshia (*36*), *Kapsha* (*30*).—Recognised by a jawari like grain which gets transformed into a white or yellow flower (36). Whitens the plant (30).

Remark.—Witness (36) describes a male blossom; witness (30) some sort of disease or the deposit of pollen.

Bundia (*36*), *Bunda* (*30*).—Same description as that of *Kapsha* (36). The seed is formed in the flower head, which afterwards produces flower (30).

Remark.—A bi-sexual form probably.

Mora (*36*), (*30*), *Morai* (*5*).—Recognised by the yellow flower on the top branch, which makes its appearance sometimes fifteen days before reaping of the crop, and has the effect of destroying the better quality of the ganja (36). Appears late, and causes breach (*sic*) of the flower spike (30). Female partly gone to seed; is not exterminated; is regarded with regret, its meaning being that the male has somehow got access and partly spoiled the crop. Examined (5).

Remark.—Probably the same as the *moria* of Khandwa, and the female with abnormal male blossom of Dr. Prain.

Charkha (*30*).—Makes the flower yellow, and lasts to the end (30).

Remark.—Much the same as *Kapsha.*

Aradnar (*30*), *Ardhanar* (*5*).—From the stock to the top of the plants small buds are formed which give rise to white flowers (30). Not examined; but must be, as its name implies, the bi-sexual plant (5).

Remark.—The same name, *adnaria*, is used in Khandwa for the ordinary male plant with some female blossoms.

Tik (*5*).—Examined and pronounced bi-sexual; the *ardhanar*, which Mr. Ebden did not examine, was probably the same (5).

Remark.—Sounds like a short name for the rather clumsy one which goes before.

Ropda (*5*).—Mentioned, but not seen by Mr. Ebden.

The fact that the plant in its sexual arrangements takes so many forms will probably be interesting to scientific readers, and the complete list is therefore given. And it is supplemented with such remarks as the information gathered in the course of the Commission's inquiry seems to justify. The Commission do not claim to have made any exact study of the subject, and have not even had an opportunity of personally examining the plant and its cultivation in the Bombay Presidency. As far as the cultivation is concerned, the enumeration of these forms of the plant is of interest as illustrating the fact that the extermination of the male requires considerable practical skill, and that the existence of the *moria* form, which develops its male blossoms with such delay and caution, is a special difficulty in the way of the complete seclusion of the female, and the production of the finest form of the drug.

The crop matures in about five months, and is therefore gathered in November or December in different localities according to the date of sowing. In Bijapur the cultivation is carried on by the ganja farmer, and the *parakhai* seems to supervise it up to harvest; and it would appear that elsewhere his services are required for a longer period than they are in Bengal, and that he exercises a wider control over the cultivation generally. As a rule irrigation is only resorted to if the rainfall is insufficient or untimely; but the crop is nearly always raised under the protection of a well. After the flower spikes are formed on the ganja plants rain does damage. The crop does not ripen till a month or two after the south-west monsoon has ceased, and during this period irrigation must often be required. Witness (27) describes what must be the simple garden cultivation, which, if it exists at all at the present day, is quite unimportant in this Presidency. The evidence shows a striking unanimity on the point that the heavy rainfall of the belt lying immediately to the east of the crest of the Western Ghâts renders that part of the country unsuitable for the cultivation of hemp. There is a strong body of evidence that rich but light soil and only a moderate amount of rain are required. This has an important bearing on the subject of the spontaneous growth.

Cultivation in Gujarat.

199. About the cultivation in Gujarat the information is that loamy or sandy soils are suitable, and that black soil is not; that the crop takes six or seven months to mature; that it can be raised either as a monsoon crop or as a cold-weather crop; that the former yields the stronger narcotic; that the males are extirpated; and that irrigation is not required. There is no information about the employment of the *parakhai*, and it is probable that in this cultivation for bhang the moderate skill possessed by the cultivators themselves answers all purposes. Both in the Deccan and Gujarat the cultivators are of the ordinary class; the industry is not confined to any caste or grade among them. The cultivators in Ahmednagar are sometimes Brahmins.

Bombay States.

200. The description of the cultivation given above applies to the Southern Maratha Country Agency and all the States in the Southern and Central Divisions where they have any cultivation at all. The following agencies have not any regular cultivation: Kathiawar, Cutch, Palanpur, Mahi Kantha, and Rewa Kantha. Such cultivation as there is consists in the rearing of a few plants which have often sprung up by accident by water-courses in gardens and in fields, generally irrigated fields, such as those where sugarcane is grown. There is no information as to whether the male plants are eradicated, or of any peculiar methods employed in the cultivation. The cultivators are either consumers, often fakirs and bairagis, or, if not, ordinary husbandmen who nurse a few plants to provide themselves with an article that will be an acceptable present to such people. The drugs appear to be very rarely sold.

Aden.

201. There is no cultivation of any kind in Aden.

Sind.

202. There appear to be two methods of cultivation in Sind, as stated by witness (5)—one by well irrigation, and the other by artificial inundation or flooding. In the latter case it would seem that the preliminary flooding has to suffice for the whole growth of the crop. The best descriptions are given by witnesses (2) and (14).

The regular cultivation.

203. In cultivation by well the area is generally smaller than in the other process (2). This would be expected, for the former involves a greater amount of labour in the preparation of the land, systematic sowing in ridges, and periodical watering. Mr. Giles' account apparently describes the cultivation under wells, which he states to be the more general. High tilth and manuring are required, goats' dung being the manure preferred. The seed is sown even as late as the beginning of January. It is put in by pinches of five or six seeds at a time on ridges. The crop is gathered in April and May. The male plants are rooted up and thrown away as useless. When the crop is ripening, some of the flower-heads are cut off and preserved separately. These are called *ghundyun*, and are said to be more intoxicating than the rest of the plants. Small pieces of *ghundyun*, which fall off apparently in the drying of the rest of the crop, are called *dodo* or *dodi*, and are preserved with the *ghundyun*. Witness (14), in describing cultivation by periodical irrigation and not mere flooding, states that the seed is sown broadcast; that after a preliminary soaking the ground has to be worked up, the seed sown, and the ground again turned over and levelled in one day. Manuring, says this

witness, is generally deferred till the plants have made some growth for fear of a noxious worm which attacks the young plants. When the seedlings have appeared two or three inches above ground, weeding begins, and the plants are thinned out. When the plants are a foot high, they are dressed with manure, and this may be done more than once during the period of growth. When the crop reaches the height of about five feet, the male plants, which are distinguishable by their small pale-green flowers, are weeded out. The reasons assigned for this practice are that the female may have more room to grow, and that the male plant is held to cause giddiness when used.

Male plant extirpated.

204. This witness says nothing about the separate collection of certain of the flower spikes, but witness (26) does: "The big *ghundis* are separated and kept apart to be used as ganja." It may be that this account refers to selection made at the time of manufacture, and not to such a selection from the still standing crop as Mr. Giles seems to indicate. Broadcast sowing appears to be the more common practice, except where a few plants are grown for private consumption. In that case the sides of water-courses appear to be a favourite situation for the plant. The evidence does not show that the people understand the effect of removing the males in increasing the secretion of resin in the female flower spikes. It would seem that the produce of the female plant is preferred for consumption, and that the male is removed because it interferes with the growth of the superior plant. It is in fact treated as a weed. It cannot, however, be doubted that the practice of eradicating it is general. Witness (10) mentions some curious practices intended to enhance the narcotic quality of the drugs, the like of which have been described elsewhere. Some people, says this witness, make an incision in the stem of the bhang plant and put opium into it, sometimes a dead snake is buried under the plant, or it is watered with dhatura-water or huka-water.

Hindus probably preponderate among the cultivators.

205. Hindus appear to be the chief growers of bhang, while the majority of ordinary cultivators are Muhammadans. Mr. Giles writes that "the actual sowing of the seed, the ploughing, weeding, and bird scaring, etc., is always carried out by Bania or Hindu cultivators, the Muhammadan cultivator supplying the bullocks which work the well and the zamindar giving the land. The Bania supplies the seed, but the manure is given in the same proportion as the produce is divided, *i.e.*, one-fifth to the Bania and two-fifths each to the raiyat and the landholder. The landholder also gives takavi or advance in cash to the raiyat." This seems to describe a partnership of a kind which probably exists in the cultivation of other produce in the same country; but there is other evidence to show that the Hindus preponderate in growing this particular crop. The habit or custom is not, however, sufficiently well marked to be regarded as a special feature of the industry.

Khairpur.

206. The cultivation in Khairpur is not likely to differ from that of the rest of Sind. There is no detailed information about it.

Berar.

207. In Berar, as elsewhere, the *pandhri* or white land near villages is preferred; black soil is too stiff, and has to be made lighter with heavy manuring. The crop is grown in the

south-west monsoon, sown in June, and gathered in November. It must be protected by a well in case of failure of timely rain. The official report says: "If the rains fall favourably, no irrigation is required till about October, when the plants are maturing, when apparently they always require to be watered." The cultivation of Berar does not differ materially from that of Khandwa, whence the seed seems to be imported. There is one curious practice which the Commission have not heard of elsewhere. The seed which is sown with the drill is a mixture of *Cannabis* and *Hibiscus cannabinus.* When the seedlings are a fortnight old, the *Hibiscus* plants are weeded out. One witness explains this practice as being due to the fact that hemp seed will not germinate by itself. The official explanation, which is probably correct, is that the hemp seed is by this means economised, the necessary space between the plants being secured at the expense of *Hibiscus* seed. The male plants (*bhangra*) are picked out after the crop has reached one-and-a-half feet in height. One witness (9) states that the *malis* who carry on the cultivation are able to distinguish the sexes, and one other (7) that the services of experts are required. The others are silent on the point. Witness (14) mentions the practice of opening the lower part of the stem, inserting opium, and binding the part up very tightly to increase the narcotic quality of the drug. The same witness moves on the date of sowing to the *Punarvasu* and *Pusha nakshatras*, July-August, which is the sowing time in the Bombay Deccan. Witness (11) states that under native rule the plant was cultivated by consumers in the yards of houses. It was watered, and when it had grown sufficiently to allow the sex to be discovered, the ganja smokers uprooted and threw away male plants. There is no particular class of cultivators, unless it be that the *malis* preponderate among them for the reason that their vocation is cultivation by means of well irrigation.

Ajmere.

208. In Ajmere there is but a small amount of desultory cultivation by the Brahmins of Pushkar, malis, and sadhus. The plant may be occasionally tended with some care when it is grown in the garden of a mali or near the hut of a sadhu; but there is some evidence that it is generally allowed to take care of itself. Mr. White King's report of 1886 says: "Even in Pushkar, however, it is grown only in small quantities on the edges of fields and along the banks of water-channels," and this seems to be the most considerable cultivation in the province. This report does not indicate any great care in the cultivation. The produce, according to the same report, is merely bhang. The evidence does not furnish any details whatever of the method of cultivation.

Coorg.

209. In Coorg the methods of desultory homestead cultivation may be employed by some low class coolies. A witness talks of the seeds being "sown broadcast in rich soil mixed with burnt clay, and afterwards transplanted in good rich soil;" but it is not clear that this method is in vogue in Coorg. Some Madras witnesses gave information of the same kind.

Baluchistan.

210. There is no information from Baluchistan.

Burma.

211. Mr. Bridges (3) and the ex-Sawbwa of Nyaungwe State (50) are the only witnesses who give any details of the cultivation in Burma. The Shans and the Danu people appear to rear the plant for the drug in their homestead land; the Kachins, Palaungs,

and Lawas to cultivate for fibre in fields. Mr. Bridges is informed that in the former cultivation the male plant is exterminated. The ex-Sawbwa does not know of this practice. But he says that the stem of the plant is split when about the thickness of the finger and a month before maturity, and a piece of wood inserted. A light earthen chatty, or more often a basket, is placed over the flower-head, and allowed to rest upon it, to prevent the plant growing and make the head grow thick. In order to do this, the flower-bearing branches are gathered together and thrust into the vessel, which has a mouth of about a foot in diameter. This is the regular practice in cultivation for drugs. The chatty or basket is kept on the plant for about a month. These processes are not unknown in India. The splitting of the stem is frequently mentioned, but the use of the chatty in only two provinces. No account of the Kachin cultivation has been furnished.

Mysore.

212. A peculiar method of cultivation is described by the Special Assistant Excise Commissioner and the Excise Assistant Supervisor, Tumkur district: "The seeds are sown in a nursery at the beginning of the south-west monsoon. A month after sowing the seedlings are transplanted into pits, each one foot deep, and dug at intervals of three feet, and well manured. The young plants are watered daily for a month or so. The stem of the plant is twisted just above the ground, and the plant itself is bent horizontally to the level of the earth in order to induce the growth of side branches and prevent the vertical growth of the plants like a stick. Just after the appearance of blossoms on the female plants, male plants are destroyed, etc." Such is the latter officer's description. The last sentence is rather faulty, for the extermination of the male plant after the female was ready to receive its attentions would not be of much use. Mr. McDonnell describes a very similar, but even more remarkable, method, to judge by its results in the size of the plant: "When specially cultivated, a circular pit two or three feet in diameter and a foot or so deep is excavated, and well manured with cow-dung and ashes. The plants are made to form a circle round the edge of the pit, and the centre is heaped up with manure as required. The stems rise five to seven and often twelve feet high, *each as thick as a man's wrist*, and are supported by staves secured with ligatures from the aloe leaf. In other cases single plants are raised in each pit. *The stem is then the thickness of a man's arm*, five feet high, and as much in diameter. The stem is taken in both hands, and twisted at the root just above the surface of the ground to stunt the growth.......................The male plant is profitless, and is uprooted and thrown away." It is by no means clear to what extent these methods are actually practised, and, for the practical purpose of producing ganja, the important operation of early eliminating the male plant has hardly sufficient prominence in their description. There appears to be a spice of imagination about them—an element in which the subject of cultivation as well as much else connected with the hemp plant is by no means wanting.

Hyderabad.

213. A fairly full description of the method of cultivation is given by the Director of Agriculture and Commerce of the Hyderabad State. The greater portion of the cultivation appears to lie in the north-west corner of the State bordering on the Bombay districts of Sholapur, Ahmednagar, Nasik, and Khandesh. The description does not show any important departure from the methods of the British districts. It may be noted, however, that "fresh seed every year from some

distant village is unavoidably necessary." The names of "male and unhealthy kind of plant" which must be weeded out are—

In Telugu country—	*In Aurungabad—*
Kotmir.	Mathisar.
Kokapoti (dog's tooth).	Ardnar.
Yongpota.	Morga.
Bougra.	Bhagira.

The last three Aurungabad names can probably be identified with the similar names used in Satara and Ahmednagar. It is stated that the extirpation of these plants is a heavy item in the labour bill. The Director mentions having seen ganja plants grown by a fakir in the compound of his hut in Warangal, which is in the eastern part of the territory, about seven to eight feet high, and each plant twelve to sixteen feet in circumference, the stem near the root eleven inches round. These were a few plants only. The cultivation is not confined to any particular class. The witnesses, however, lay stress on the fact that it requires special knowledge and skill, which are possessed by very few.

Rajputana.

214. If there is any regular field cultivation in Rajputana in areas set apart for the crop exclusively, it is not very important, and the papers furnish no information of the methods employed in it. Some details are supplied of the desultory garden cultivation. It is carried on by those who possess gardens, who are generally *malis*, but may be *Kumbhars*, *Kachis*, *Ghanchis*, *Sivris*, or of any other caste. Bhang is rarely, if ever, grown as the principal crop. It is sown in the beds with poppy, tobacco, onion, or other vegetables in the month of January or February. Sometimes it is sown round these beds, which may contain in place of the crops mentioned above coriander, mustard, or *rijka* grass. It is gathered in June. It does not appear to receive any special care. Its growth is to a great extent haphazard, and often springs from accidental sowings. The practice of removing the male plant is not found in any State. In some places the saline character of the soil and the scantiness of water forbid the cultivation. The Commission have been informed that experiments to grow the plant in Erinpura failed.

Central India.

215. Mr. Gunion's memorandum contains a description of the methods of cultivation for ganja and seed in the Indore and Dewas States. The same field is cultivated for bhang and seeds in Indore, but in the Dewas State the male plant is removed from the bhang field. They do not materially differ from that of the Nimar district in the Central Provinces, and it may be doubted if the elimination of males in the Dewas bhang cultivation is a correct description of the selection which is made. It may be noted, however, that the Indore cultivator, unlike the Khandwa cultivator, does not trust himself to buy the seed or exterminate the male plant. Experts are employed for these purposes. In Mr. Gunion's account mention is made of "inferior and unhealthy plants" to be exterminated apart from the removal of males, and it would appear from this that the cultivator, or it may be the Indore reporter, had not such clear ideas of the various sexual forms of the plant as the Nimar cultivator was found to possess. In the Indore cultivation gaps caused by faulty sowings or failure of seed to germinate are filled up with

new seed. The soil on which the plant is grown in Dewas is described as "dry, stony, elevated loam." In these States the cultivation is not carried on by any particular class, but it would appear that in Rewah the *Kachis* alone undertake the industry.

The Political Agent of Bhopawar gives the following description of the desultory kind of cultivation employed in that part of Central India: "Hemp seed is sown in poppy or maize fields. When the plant is above two-and-a-half feet high, the main stem is split near the root and a piece of tile thrust in. This prevents the plant from setting seed freely and makes the tops fit for ganja. When particularly strong ganja is required, each hemp plant is watered once with half a tola of opium dissolved in water. The cultivators believe that by transplanting the young plant into the mouth of a dead venomous snake (cobra preferred) the ganja becomes unusually strong." The Commission have heard of the extirpation of male plants in the cultivation of the Gwalior State, and the same information is furnished by Mr. Gopal Ram in the appendix to the North-Western Provinces memorandum. The latter authority also mentions that the crop is irrigated, and that "some cultivators sow wheat in the ganja fields in the months of October and November." The cultivation covers the season from July to December.

Baroda.

216. No details are furnished in the State report, but the cultivation is of very small extent, and it may be confidently assumed that its methods are the same as those of the Gujarat Division of Bombay, with which the greater part of the Baroda territory is intermingled.

Kashmir.

217. The State report would show that there is no cultivation in Kashmir. Dr. Royle's "Fibrous Plants of India" and the references to the hemp plant in "Punjab Products" have been consulted without finding any definite statement to contradict this information. In the latter work both the bhang and "fibre" sent from Kashmir and Ladakh to the Punjab Exhibition are mentioned, but they may very well have been the produce of the wild growth. Dr. Watt refers in his "Hemp or *Cannabis sativa*" to cultivation of the plant in Kashmir, but without mentioning his authority. Dr. Royle's abstract of information at page 327 states: "All along the Himalayas, that is, in Nepal, in Kumaon, in Garhwal, and up to the newly acquired hills of the Punjab, at elevations of from 3,000 and 4,000 to 7,000 feet hemp is cultivated by the hillmen." Beyond this point westward his information does not go. There is a curious statement by the Governor of Kashmir that "almost all wild hemp, whch is called *talia* in the Punjab, and is generally female plants in the above-mentioned tahsils, is used for the preparation of ganja locally known by name *gard* bhang (*chura* charas)." The meaning is not clear; but the preponderance of the female plants, if it is the fact, indicates either some peculiarity in the environment of the plant in these regions or tending by man.

Nepal.

Mr. Hodgson—Page 323 of Dr. Royle's "Fibrous Plants of India."

218. The answers to the Commission's questions furnished by the Nepal Darbar would lead to the belief that cultivation is very uncommon, and only carried on in a desultory way by consumers of the narcotics. But in Dr. Royle's "Fibrous Plants of India" will be found at page

323 a description by Mr. Hodgson of the cultivation for fibre. He states that the cultivation is peculiar to the northern districts of Nepal. These districts, "popularly called Cachar, are nevertheless the prime seats of culture, and there alone is the plant manufactured into rope or cloth, though the edible extracts are sometimes prepared nearer to and around Katmandu." Regular cultivation for fibre is therefore confined to the northern districts. The season of sowing is from March to April. The season is earlier, but the course of cultivation is much the same as in Kumaon. Mr. Hodgson states that "damp soils, comprising black earth, are fittest for this crop." This description does not agree with other information on the subject. The plants flower and fruit in July, and are in their full growth at the beginning of August. While yet succulent and in flower they are cut, with the exception of some seed plants, which are not to be reaped till October. It is the bark of the young but full grown July plants which is soft that is used for making cloth. That of the old or October plants is hard and not suitable for manufacture. Mr. Hodgson says nothing in the extract made by Dr. Royle, if there is anything to be said, of the processes adopted for developing the narcotic in the growing plant. The fibre cultivator of Kumaon does not apparently do anything with this special object, and yet his female plant yields charas. It is probable that the early removal of the males may have the tendency in both places.

Information furnished by the Darbar.

219. The Darbar answers say nothing about the fibre cultivation, but they contain some information regarding the scattered cultivation for narcotics. The following morsels may be quoted: "When the plants put forth fine down, the tip of the plants is cut off, and the big leaves are plucked off, and the plant is shaken from time to time so that the down may fall off. This causes a large number of branches and fine leaves to be produced, and the latter, getting twisted and stuck together, are called in Nepalese *lata*." "The plant which produces much seed is no good; that which produces little seed is good." "Some persons in the hills plant a few trees which are to be had growing wild." "By slitting the stem of the plant and inserting a piece of opium or clove or *bhiroza* wood and tying up the part with a string the ganja becomes somewhat more intoxicating. This is done by those who know about it, and is not the work of any particular class." "The male plant of the ganja is solid; the female one is hollow. The male plant is more intoxicating than the female. When the plant has attained a height of two or two-and-a-half feet, it is slightly slit, and ascertained whether it is a male or female."

From these extracts it may be gathered that the wild seedlings are transported and planted in suitable places, and that every endeavour is then made to encourage the secretion of the resin in the female (called male) plants. Probably the cultivators know the effect of exterminating the male plant, and follow the practice, though this is not expressly stated.

CHAPTER VI.

PREPARATION OF THE RAW DRUGS FROM THE CULTIVATED AND WILD PLANT.

Bengal.

220. The preparation of the finest sort of ganja is a somewhat laborious process, and requires skill and knowledge. For a full description of the preparation of flat, round, and chur ganja in the Ganja Mahal, the reader is referred to Babu Hem Chunder Kerr's report. Dr. Prain has given a shorter account of it. It must be remembered that the terms 'flat,' 'round,' and 'chur' are peculiar to the Bengal manufacture and excise system. Their exact meaning is rarely understood outside the province. The more important details of the processes may be briefly noticed.

Bright sunny weather is essential to the best manufacture. The crop does not all come to maturity at the same time, and the plants must be manipulated within three or four days of maturity, or they become useless. These conditions have to be borne in mind in arranging for the manufacture, and it would seem that the plants have sometimes to be gathered before they are full ripe. The plants are cut in batches, as many as can be handled, by the available labour and means in three days. The *Khasia* plants are left standing, or, if gathered by mistake, are rejected in selecting the portions of the plant to be worked up.

The manufacture of flat ganja.

221. The manufacture of flat ganja takes three days, and is carried out on a piece of ground near the field which has been specially levelled for the purpose, and is called the *chator* or *khola*. The number of plants handled in each three-days' operations is usually about fifty or sixty. The first day the plants are cut in the morning, brought to the manufacturing ground, and spread out in the sun till the afternoon. They are then cut up one by one into lengths of about one or two feet. Those having flower spikes upon them are retained, and the rest is thrown away. The portions selected are spread out in the dew for the night.

The work of the second day begins at noon. It consists in alternately pressing and drying the crop and getting rid of useless leaf and seed. The branches are piled by bundles of five or ten, flower spikes inwards and overlapping, in a circular heap about four feet in diameter. The workmen tread this down, moving round upon it and supporting one another. Bundles are added from time to time till the heap is about two feet high. A mat is then placed over the heap, and the men sit or place weights upon it. After half an hour of the pressure the pile is unstacked, the bundles are taken off and beaten together over a mat to shake out seeds and leaf. The heap is again built exactly as before, the upper layers of the previous heap being put at the bottom of this, and the processes of treading, pressing, unstacking, and beating are repeated. The bundles are now laid out side by side on mats and trodden individually, the workman holding the stem ends with one foot while he passes the other foot downwards over the flower. The bundles are turned and beaten against the mat during this process. When it is complete, they have been reduced in size, and consist of four or five twigs each. They are then laid in slanting position over a pole on the ground, and left for the night.

The third day's work begins in the early morning. The twigs are separated, and again piled in bundles in the same circular form as before, trodden for a short

while, and covered up. Work is resumed at 10 A.M. The heap is unstacked and the bundles are carefully handled to remove leaf. They are then laid out in rows and trodden. During this process they are turned over, and at intervals the sun is allowed to play upon them. They are then handled again and gently beaten, and spread out more completely than before. Those that have retained an undue quantity of leaf are stood up in the sun. The last process is to press the twigs individually with the feet in the way already described. The manufacture is now complete. The flower spikes have been pressed into flat masses, and the leaf and seeds have been as far as possible removed. In the larger specimens the branches stand out from the stem and one another, the whole being quite flattened. The twigs are gathered into bundles of two standard sizes—a certain quantity of large twigs in the one and of small twigs in the other. This is called flat or *chapta* ganja.

Manufacture of round ganja.

222. The manufacture of round ganja is not completed till the fourth day after the plants are cut. The plants are gathered somewhat later in the day and laid out under the open sky for the night. The sorting is done the next morning, a great deal more of the woody portion being rejected than in the case of flat ganja The twigs are laid out in the sun till noon, when the men return to the *chator* and rolling is begun. A horizontal bar is lashed on to uprights about four feet from the ground, and mats are placed on the ground on each side of it. Bundles of twigs, either tied together by the stem ends or not, according to the skill of the treader, are set out on the mats. The men range themselves on each side of the bar, and, holding on to it for support, proceed to roll the bundles with their feet. One foot is used to hold the bundle and the other to roll it, working down from the stems to the flower heads. This process goes on for about ten minutes, and during it the bundles are taken up and shaken from time to time to get rid of leaf. The bundles are then broken up and the twigs exposed to the sun. A second but shorter course of rolling by foot follows, and then the twigs are hand-pressed, four or five together. After this the twigs are opened up and exposed to the sun again. Towards evening the twigs are made into bundles of about one hundred, and placed on mats and covered up for the night.

The next morning the bundles are untied and the twigs again exposed to the sun. If they are sufficiently dry by midday, they only require a little handling and rolling to complete the manufacture. If they are not dry enough, the first course of rolling has to be repeated, after which the useless leaves fall off with a very little manipulation. The twigs are next sorted according to length and tied into bundles of three descriptions—short, medium, and long. In this process all useless twigs and sticks are eliminated. The bundles are placed in rows under a mat which is kept down by a bamboo, and left for the night. The manufacture is completed the next day by exposing the bundles to the sun, heads upwards, till the afternoon, and then searching them with hands and bits of stick for any leaves that may have remained in them. These are shaken out, and with them pieces of the compressed flower heads, which have been accidentally broken off, fall on to the mats.

The Bengal manufacture specially elaborate.

223. Babu Hem Chunder Kerr writes that when the preparation of the round ganja is carried out by the dealer who has bought the standing crop, much more care is taken to reject stick and inferior flower head than when the cultivator is the manufacturer. The round

drug is the superior product, and contains much less useless matter than the flat. But it is plain that in both cases the process of manufacture in Bengal is technical and elaborate, and this is the point which it is desired to bring into strong relief. It may be noted that occasionally, when the weather is unfavourable, the drying is effected by fire, with the result that the ganja is discolored and reduced in market value.

The effect of the manufacturing processes.

224. Dr. Prain describes the purposes which are served by the above processes: "The drying process (*a*) removes the watery juices of the plants, and thus not only reduces its weight as an excisable article, but removes to a considerable extent the risk of mould; (*b*) causes the comparatively inert small leaves to shrivel, and so makes their removal more easy. The kneading process (*a*) removes more or less completely the comparatively inert leaves, still further reducing the weight. The article produced, being for its bulk more active in proportion to the absence of leaves, the more thoroughly they are removed, the better a sale does it command; (*b*) it presses together the resinous parts on which the active principle is most plentifully deposited. These being rendered somewhat sticky by the presence of the resin become more or less agglutinated, and are thus less liable to fall off in transit, and so reduce the active power of the ganja." And he discusses these principles with some care. The Commission would have been inclined to attribute a great part of the importance of the kneading process to its effect in shutting out the access of air to the interior of the ganja masses, and so tending to delay their deterioration.

Disposal of stick, leaf, seeds, and fragments.

225. It has been seen that a great quantity of stick, leaf, and seed, and not a little flower head, have been separated from the bundles of prepared ganja. The stick may be used as fuel. The leaf is winnowed from the seed and thrown away, though it has been proved by analysis to contain the narcotic principle in larger quantity than ordinary bhang. But it cannot be ascertained that it is used as bhang. The seeds are kept for the next year's culture, and the superfluity may find its way into the market. The seeds are not narcotic, and they are sometimes eaten, besides being used for the expression of oil and other purposes. The bits of flower head are, in the case of flat ganja, picked up and pressed into the mass of the flower heads again or burnt. The latter will probably depend on the vigilance of the Government supervisors. In the case of round ganja, they form the "chur" or "fragments" on which the excise tariff imposes the highest duty, because in that state the drug is absolutely free of leaf and stick.

Preparation of bhang.

226. Bhang as recognized by the Excise Department is the dried leaf of the *wild* plant. The drug that enters the Bengal golas is collected chiefly in the districts of Bhagalpur, Monghyr, and Purnea. But the bhang of Patna, Benares, and Behar is also spoken of as being of high quality. The preparation consists simply in drying the leaves. The plants are cut in April, the *Chaitra Sankranti* being considered an auspicious as well as a seasonable day, but the gathering goes on up to June and July. They are laid out in the sun, and one day may be sufficient to dry them so as to allow the leaves to be shaken or beaten off. The leaves are collected with precautions against the mixture of dust or dirt, packed in bags, and so conveyed to the local gola, and eventually to the shops. The early flowering stage would seem to be that in which the plant yields the best bhang.

From the manner of collection and manufacture, plants of both sexes and also some flower heads must enter into the product. It is stated by one witness that the seed is as far as possible separated and rejected. This is probably correct. Another states that " wild bhang is collected by the people in Bhagalpur, Monghyr, and Purnea districts in two forms—one consisting of dried leaves and small stalks, and the other of the flowering shoots; this latter not to a great extent." This appears to refer to the collection for home consumption, and not that by the licensed dealers for sale. The flowering shoots here referred to are probably the female flower heads, in which there is reason to suppose the resin is occasionally secreted in more than the usual quantity, even when the plant is uncultivated.

Bhang is gathered from the spontaneous growth for home use wherever that growth is found. There is considerable conflict of opinion as to the extent of the practice. The Commission are inclined to accept Mr. Gupta's view that " the use of untaxed bhang is general," and that, among the rural population at least, the consumers collect the drug for themselves whenever the plant is at hand. Looking to the prevalence of the wild growth over a great part of Bengal, and the absence of any technicality in the preparation of the raw article, any other view would require to be supported by strong evidence. The leaf is for the most part simply dried; but Mr. Jenkins, Collector of Dacca, reports that he has been told of a more costly process, which consists in the leaf being boiled in milk and water after being sun-dried, and again dried for storage. This is confirmed by a pleader of Dinajpur, who professes to know the method of preparation of bhang from the wild plant. He says, probably confusing the sexes, that the female plant is generally used, though the male may be also, and that " after the leaves are dried for some time, they are boiled in a mixture of from 10 to 25 per cent. of milk and 90 to 75 per cent. of water. After drying the leaves once again, they are fit for use as siddhi or bhang." It is, however, certain that this practice is uncommon, and that simple drying is the method by which bhang is almost universally prepared for keeping.

Preparation of ganja from spontaneous growth.

227. It has already been suggested that ganja can be got from the wild plant. The question is important, and must be examined in some detail at the risk of the discussion appearing elementary to many readers. It has been shown that the plant is not wild in the exact sense of the word, and for present purposes this fact must be emphasized. The plant is not only an old escape from cultivation, but its tendency to revert to the uniform characters of a wild species is being constantly checked by contact with cultivation. Its association with man frequently supplies it with the richest kinds of food, and with all vegetation this tends to the development of abnormal characters. The generative functions may thus be affected to the extent of partial or even complete destruction in individual plants or groups of plants, and these may be of either sex. It is possible also for the female plant to be secluded in a variety of other ways. The experience of cultivation justifies the presumption that if the female plant in healthy growth is prevented from freely developing its seed, its flower spike will be highly resinous. There appears therefore to be a strong probability *a priori* that the spontaneous growth quite untended should often produce a flower head which can be converted into ganja. Evidence is not wanting to corroborate this conclusion, for it speaks of wild ganja being collected and smoked; but it is impossible to pronounce posi-

tively with regard to any of it that the plants from which the ganja was gathered was altogether innocent of cultivation or tending.

Evidence as to existence of wild ganja.

228. The quality of this evidence may be judged from the following references. It leaves no doubt that many people are able to distinguish the plants of different sexes in the spontaneous growth, calling them by the names of ganja and bhang, and recognize the more narcotic character of the female or ganja plant, sometimes preserving it for the purpose of smoking. The Assistant to the Director of Land Records and Agriculture, when enquiring regarding the spontaneous growth in Bhagalpur and Purnea, observed that a few selected plants, mostly females, were not uncommonly left in the ground. He reports: "These acquire a nice bushy appearance not unlike that of the ganja-bearing plant. All this made me suspect that the people knew a great deal more about the bhang plant than they were willing to avow. I was told by several persons, among them a European gentleman who has long resided in North Bhagalpur, that bhang is often used to adulterate ganja." Abhilas Chandra Mukharji says: "*Jata* bhang (*Sivajata* bhang).—The flower of this kind of bhang is whitish; it grows luxuriantly, and the plants are of a larger size than the ordinary wild ganja plants. The flowers resemble ganja flowers. The flowers and leaves agglutinate naturally, and look like *Sivajata* (cluster of hair of the god Siva, from which it derives its name). Its intoxicating properties are less than the Rajshahi ganja. The flowers are collected and smoked just like ganja. It grows along with other hemp plants rather scantily. It grows near Toke and in some parts of the Manikganj Sub-division of the Dacca district." He states again (9-23) that bhang is rarely smoked, and that only by the lower and poorer classes; that the part of the plant used for smoking is the *sir-kali* (leading flower spike), which is dried and preserved. Sosi Bhushan Roy says after remarks which show that he has a very fair idea of what he is talking about: "It may also be supposed that hemp in its degenerated and wild condition becomes what we call bhang or siddhi. I have myself seen that such bhang plants as have a luxuriant growth bring forth leaves, which sometimes get matted together, and, if collected before inflorescence, might to some extent serve the purpose of ganja." Witness (82) states (answer 23) that the Nepalese prepare a crude sort of ganja which they call bhang, and this they always smoke, and (22) gives evidence to the same effect. Mr. Maguire (23), Officiating Collector of Khulna, writes: "A sort of ganja is prepared from the wild plant wherever grown, but, except when prepared from female hemp, it is very weak." The Collector of Bankura (10) reports the possibility of preparing ganja of very inferior quality from the wild plant. Babu Suresh Chunder Bal (69) says: "I think ganja can be prepared from that particular variety of the wild plant which is known to the people as the ganja plant." Bhuban Mohun Sanyal of Purnea (225) states: "I hear that ganja cannot be prepared from the hemp plant generally growing wild in the district. I have, however, heard that it can be prepared from a plant sometimes seen (though very rarely) growing wild and known as ganja plant." These are all good witnesses, though the evidence of some of them is based on inquiry and not personal observation. It is unlikely that they are talking of anything but the hemp plant, for it is very well known in India generally, and specially in Bengal and Northern India. The descriptions given by witnesses 63 and 196 pourtray the female hemp plant very clearly. It appears then that a very

inferior but smokable ganja may occasionally be obtained from the spontaneous growth. The great majority of witnesses nevertheless state that ganja is not procured from the wild plants, and undoubtedly what is ordinarily accepted as ganja cannot be so obtained. There is no evidence that it undergoes any process after being gathered but simple drying.

Preparation of ganja from illicit cultivation.

229. The methods followed in the homestead cultivation of Bengal and the Tributary States of Orissa and Chota Nagpur have been described. Regarding the possibility of preparing ganja from the homestead cultivation of Bengal, the Sub-divisional Officer of Jangipur may be quoted. He writes: "I have seen ganja plants detected in Bhagalpur and Jangipur. From their twigs ganja as good in appearance as in Naogaon (the particular sub-division where ganja is cultivated under Government supervision) can be prepared, but it is alleged that the flavour is not so good as those grown in Naogaon." This cultivation is of course illegal in British territory, and it is probable that but little ganja is obtained from it. No information has been gathered as to any special care being taken in the preparation of it, and it is probable that the usual practice is simply to dry it.

Tributary States of Chota Nagpur and Orissa.
Preparation of ganja and bhang.

230. In the Tributary States of Chota Nagpur and Orissa ganja is said to be obtained from the wild as well as the cultivated plants, but the evidence points generally to the plant being more or less cultivated in all cases. There is evidence also that some care is taken in preparing the drug (ganja), and it is probable that the same or very similar practices prevail in both groups of States. Mr. Grimley's inquiry of 1890 gives some information on this subject. Sirguja reports: "The first leaves are plucked away, and from the second leaves the ganja and bhang are made;" and again—"When the leaves grow intertwined, they are used as ganja." Udaipur—"It is exposed to the dew during the night, and afterwards the plants are bundled and dried in the sun. After two or three days they become fit for use." Gangpur—"When the plants mature they are broken off with all their leaves and branches, and are kept wrapped up for some days in the leaves of a tree called *khair* under straw." Bonai—"When the plants are ready, those that are intertwined are cut and dried and preserved, and while still soft are wrapped round with the bark of the plantain tree."

The present evidence furnishes no addition to this information from the Chota Nagpur States. But the District Officer of Angul in Orissa states that "when the tree is ripe and the leaves assume a yellowish colour, the plants are cut, tied into bundles, or rolled in a mat or gunny bag, and then placed under heavy weights for two or three days. Then it is taken out, exposed to dew, leaves and seeds are shaken off, and then it is dried and tied into bundles and stored. This makes flat ganja." It seems clear that by the use of the word "flat" the witness is not referring to the Rajshahi drug, but to that of the country of which he is speaking. Mr. Taylor (36), who has had a long experience of Orissa, but admits that his information on the particular point has been recently acquired, says that "the hemp heads are cut on the seeds ripening in November. The heads are tied in small bundles and sprinkled with lime water, and then alternately buried and exposed to the sun for two or three months, when the ganja is fit for use." He says in his oral examination: "The plants are buried for a week at a time without anything to protect them from contact with the earth."

These processes amount after all to little more than simple drying and removal of the coarser leaves. It is difficult to understand what purpose is served by the process of burying which Mr. Taylor describes, and it may be doubted if the description is accurate. The resulting product is far inferior to Rajshahi ganja. This has been amply proved by inquiries made in past years, in course of which the drugs were compared. The leaf bhang is prepared by simple drying, as in Bengal proper; but it will be seen that the weak ganja of the Garhjat is largely consumed as drink.

Hill Tippera.

231. The preparation of the drugs in Hill Tippera is certainly not more elaborate than that just described; but no information on the subject has been furnished.

Preparation of charas.

232. There is no evidence of charas being made in Bengal, though the resin is available in plenty in the cultivated plant of the Ganja Mahal, and in a less degree in other growth. This form of the drug is not appreciated in the province, and the absence of demand no doubt accounts for the art of manufacture not having grown up. An infinitesimal amount may be collected from the feet and hands of the operators in the ganja manufacture, but it is doubtful if this small supply is utilized.

Classes engaged in preparation of the drugs.

233. The preparation of ganja and bhang is carried out by the cultivators and the servants of the bhang contractors respectively. The preponderance of Musalmans in the cultivation of ganja in the Ganja Mahal has been noticed. Beyond this it cannot be said that the preparation of the raw drugs is the business of any special class, unless it be that the Hindus from Behar and the North-Western Provinces, being in large proportion confirmed bhang drinkers, are those who also most commonly collect that drug for home consumption.

Assam.

234. The dried tops of the wild hemp plant are used to some extent for smoking. But there is nothing to show that the article is prepared in any other way than by simple drying. The extermination of the male plant in connection with the wild growth does not seem to be practised either in the valley or on the hills within and on the borders of the province. This is an essential preliminary to the preparation of the superior form of ganja. The dried tops make bhang which may be used for smoking or drinking. Excise ganja is known among the consumers as *mohini* bhang. The epithet *mohini* or fascinating is never applied to the wild product. There is no evidence that charas is prepared or even known in the province.

North-Western Provinces.

Preparation of ganja from plant cultivated secretly.

235. Mr. Stoker made special enquiries regarding the local production and preparation of ganja, and, as regards the extent of the practice, the results are given in a concise form in his memorandum. The evidence furnishes but few details of interest to add to his account. The cultivation of hemp for the production of ganja is not carried on openly. "The whole of the ganja offered for public sale is imported. At the same time it would be incorrect to say that ganja is nowhere grown or manufactured. Careful enquiry has elicited reports from several districts that a small amount of ganja is surreptitiously made." These are Mr. Stoker's words, and they exactly express the impression

left by the evidence which the Commission have collected. No witness has given a detailed description of the method of preparation. Mr. Stoker received a report of the process in vogue in Ghazipur, which he says " closely resembles that employed in Bengal." This is only corroborated by two or three witnesses to the extent that the ganja is put under pressure. Specimens of ganja from Ghazipur and Sultanpur were forwarded to the Commission, and Mr. Stoker's opinion is that the Ghazipur specimen was superior to the ordinary *pathar* ganja, and not much inferior to Bengal *baluchar* (flat). The other was much the same as *pathar*.

Preparation of ganja from wild growth.

236. Regarding the preparation of ganja from the wild growth, Mr. Stoker has ascertained that the produce of the female plant is smoked in the Kheri and Bara Banki districts, and he says that there are indications of similar use in other districts. The evidence on this point is rather strong, and leads to the belief that wherever the plant is common as a wild growth, the poorer classes of consumers make use of it for smoking. The distinction between the male and female plants is well known, as Mr. Stoker states ; and some of the witnesses say that the plants are operated upon by twisting the stems to prevent flowering. The plants so treated must be the ganja or females, though that is not expressly stated in all cases. But witness (155) may be referred to, who states that bhang is the natural plant ; when it is twisted it is called ganja. A Deputy Collector (46) states that ganja can be prepared from wild female hemp plants if all the males are uprooted from their neighbourhood, and he is a witness who does not appear to be drawing on information he may have picked up regarding other provinces. It has been seen in connection with the cultivation that the advantage of isolating the females is known to some persons, the knowledge having been handed down from a time when ganja was openly cultivated, and it is difficult to believe that it should be confined to a very small number. The fakirs all over the country, who are mentioned as the principal secret cultivators, are certainly not ignorant on this point, and would disseminate the knowledge. The report of the Deputy Commissioner of Kheri, quoted by Mr. Stoker, that this art is not known, appears therefore to be open to doubt, or, if true, to be true only of the locality reported upon. The subject is probably one on which people are inclined to be reticent for the same reasons as actuated those of whom the Assistant to the Director of Land Records and Agriculture in Bengal made his enquiries. The rearing and tending of the hemp plant in the North-Western Provinces may not be illegal ; but there is plently of evidence that the people think it to be so, and that would be sufficient to make them cautious in giving information. There is no evidence that the ganja gathered from the wild plant is prepared by any other process than mere drying. Witness (202), a raiyat of the Kheri district, and (48), a Deputy Collector of Lucknow, state that the ganja plants are gathered in November and December. This would seem to refer to the higher lands. The season of growth on the low lands appears to be from December to June. It may be noted that Mr. Wall, a late Commissioner of Excise, does not believe that ganja is produced by the wild plant, and that many other witnesses take the same view. The local production of ganja does not appear to have ever been so considerable, at least in recent years, as to attract the attention of Government in the Excise Department, and there is no reason to suppose that it has increased since it was suppressed in Oudh. The subject therefore is only of secondary importance.

Preparation of bhang.

237. Bhang is prepared by cutting and drying the plants, cultivated or wild, and shaking or beating out the leaves. This is done either by the contractors themselves, or by "residents of jungly tracts for sale to licensed vendors" (38). The districts where the cultivated bhang is produced have been named. The supply of wild bhang is drawn from various places in the belt of wild growth below the Himalayas. The gathering goes on from March to June. The zamindars on whose lands the plant grows appear to make some money by selling it to the contractors (247). Bhang is sometimes dried under straw or other covering, when it turns yellow, instead of retaining the green colour, which it does if dried in the sun (21, 248, 203). The object of this is not clear.

Preparation of charas.

238. In these provinces charas is prepared to a small extent from the crops grown for fibre in the Himalayas, to a less extent from the Himalayan wild growth, and to a still smaller extent from the wild growth of the plains. A very small amount may even be prepared from the plants cultivated in a desultory way. The methods of preparing charas from the fibre plants are described by witness (49). The *sujango* or female plants, having been cut in November, are spread out to dry for twenty-four hours. The people then sit round in the heat of the day, and pluck off the flower heads, which are now full of seed, discarding the coarser leaves. Each handful is rubbed between the palms for about ten minutes and thrown aside. In course of time a quantity of juice accumulates on the palms, which is scraped off and rolled into balls. These are charas. Sometimes the plants are trodden instead of handled, and the feet scraped. A more uncommon method, by which a choice kind of charas called *chahar mulhi* is obtained, is to pass the hands up the ripe plants while they are still standing in the field. This plan is not approved, the witness says, because it is supposed to damage the fibre. Other witnesses (21, 43) mention the practice of running through the crop or growth on a dewy morning, and scraping off the resin which adheres to the body. Witness (248) states that the resin, having been collected, is kneaded on hot stones; but the account of witness (49) that the process of manufacture ordinarily ceases with the making of the resin as scraped from the hands into balls is probably reliable.

There is a considerable amount of evidence and opinion that charas is prepared from wild plants. Witness (49) states that in a small area at an elevation of 8,000 feet called Urgum in Palli Talla Pamkhanda, which appears to be a pargana of Garhwal, the wild hemp is of superior quality. It grows near a temple of Siva, to which fact the people attribute its superiority. Charas is made from it by the common process of rubbing with the hands, and is given to fakirs and pilgrims to Kedarnath and Badrinath. Witness (232) speaks of the manufacture from the wild plants, and states that the leaves after the rubbing form ganja or bhang, which is used for drinking. Witness (43) deposes to the production of charas from the wild growth in the Bhabar and Terai. Witness (109) has seen it made apparently in the Almora country. Witness (38) has seen the process on the banks of the Gogra which bounds the Nepal and British territories. And so we are brought down to the plains. Mr. Stoker writes that "in Garhwal a substance is produced which might be classed with either ganja or charas. After the charas has been extracted from the female flower, the powdered or broken

flowers are mixed with hemp seed and smoked in a *chillum*. This seems akin to the *garda* of the Punjab."

Miscellaneous information about the preparation of charas.

239. The evidence from this province contains information about the manufacture of charas in Nepal, Yarkand, Peshawar, and Kandahar, which may be noted, though it is not all direct evidence. The Bhutias of Nepal scatter ashes on the plants in the evening. In the morning they enter and walk through the crop or jungle clothed in leather, to which the resin adheres. This is scraped off and makes a strong kind of charas. It may be noted that Dr. Gimlette, Residency Surgeon, Katmandu, was unable to verify the accounts he had heard of this process, but found that in the country 50 miles round the capital the drug was collected by rubbing the young flowering tops between the hands *in situ* (Watt). In Yarkand, according to witness (62), the dried plants are beaten over a cloth, and the greyish powder, which falls upon it, is collected and packed in bags, where it agglutinates by some process, of which exposure to the sun forms part. Witness (192) has "seen charas prepared near Peshawar and Kandahar. People go into the fields with leather leggings on, and the charas sticks to them, and is scraped off." The same witness has seen bhang prepared in great quantities at Hardwar, Lahore, Kabul, and Kandahar.

North-Western Provinces States.

240. Regarding the Native States in the North-Western Provinces, there is nothing to be added to the information collected for the province generally.

Punjab.

241. Though some witnesses make mention of the smoking of bhang leaves, there is no evidence of the preparation of the flower head either of the uncultivated or cultivated plant for use as ganja. The smoking of the produce of the plant in any form except charas is evidently extremely rare. According to witness (59), "the word 'ganja' is sometimes applied to charas."

Preparation of bhang.

242. Bhang is prepared both from the uncultivated plant and from the small quantity of cultivated plant in the ordinary way, *viz.*, by simple drying. Mr. Drummond (13) says that the flowering tops are preferred. The zamindars do not generally take any payment for the bhang gathered from their lands. The plant grows from December to June-July. The usual time for gathering appears to be May. No. (73) says May or June. Lala Kesho Das, Extra Assistant Commissioner, reports that in June-July "the hemp plant acquires peculiarly noxious qualities, and hence it is during that fortnight that bhang intended to be used as a drug is cut." The bhang of some localities is regarded as superior, such as that of Ambota and Gagret, of Bhimbar in Kashmir, and of Gurdaspur. The cultivated plant may yield a superior quality of drug, but there is not much evidence of any preference for it over the wild drug.

Preparation of charas.

243. There is practically no evidence of charas being prepared below the mountains. The method of preparation followed in Kulu and the Hill States is that of rubbing the flower heads between the hands and scraping off the resin accumulated on the palms or

on the feet if the operation consisted in treading the plants. The solitary piece of definite information supplied about preparation in the plains is given by Mr. Kirthi Singh (14): "Sometimes a cultivator may want a little charas for private use, in which case he beats the flowering twigs over a piece of cloth laid on the ground, and then collects the greyish white powder which falls. This requires only to be dried a little in the sun, and it is ready for use."

Charas in "Punjab Products."

244. In the "Punjab Products" the manufacture of this sort of charas called *garda* is described. The finest quality is when the dust is of a reddish colour. This is called *surkha*. When it is green, it is called *bhangra*. The most inferior is that which adheres to the cloth after shaking, and has to be scraped off or shaken off with more violence. This is called *khaki*. In each case the dust has to be kneaded with a small quantity of water into a cake, and then forms charas. It is stated that this drug is much in use. The specimens which formed the basis of the article were none of them from the plain districts of the Punjab, except possibly one from Dera Ghazi Khan. They came from Lahoul, Spiti, Bokhara, Yarkand, Dera Ghazi Khan, and Kashmir.

Preparation of charas in Yarkand.

245. It will be of interest to quote other descriptions of foreign manufacture. Witness (86) has been in the habit of visiting Ladakh for purposes of trade, and has there learnt the following details from Ladakh merchants: "In Yarkand bhang is cultivated in the month of Baisakh in waste lands and round the fields of other crops for the manufacture of charas. It remains standing for seven months, and is then reaped in the month of Katik, when the blossom is ripe, and then stored on the roofs of houses. It remains there for one month and gets dried in the meantime. The zamindars then thrash the plants after separating the larger leaves by night within their houses. The smaller petals and flowers then fall on the ground and are reduced to powder. It is then sifted thrice, put in bags, and sold to the traders. The merchants go on storing it up until the month of Jeth comes, when they place it in the sun, and a kind of oleaginous substance oozes out of the powder. It is then kneaded like tobacco and put in bags made of cloth. The following three or four kinds of charas are prepared from it—*mushak, bahara, pai, and kuppi.* They are then closed up in leather." Mr. Dalgleish is quoted by Dr. Watt as giving a description of the preparation similar to the above. The Deputy Commissioner of Bannu says that honey is mixed in the powder of the flowering tops, after which the stuff is packed in leather bags and kept for a year in the sun. Hari Chand, Assistant to the Commissioner of Excise, reported in 1890 of the Yarkand manufacture that "the leaves are ground in December. The flower is kept in bags of five sérs each till June. The bags are then put in the sun, and the flower rubbed with hands and feet till it gives oil. It is then put in leather bags and hammered till it becomes one block. The blocks are of 54 sérs each." There is a certain similarity in all these methods, and they probably give with fair accuracy the general outline of the important manufacture of Yarkand. *Garda*, as described in the "Punjab Products," would appear to be the Kashmir preparation. The word seems to mean merely dust in its common use.

Punjab States.

246. The memorandum on the province contains all available information regarding the Punjab States.

Central Provinces.

Preparation of ganja.

247. The method of preparing Khandwa ganja is described by the Deputy Commissioner of Nimar and the Excise Commissioner. The harvest begins in the first or second week of November. The flower heads, which the cultivators call *mal* or produce, are broken off with about twelve inches of twig, carried in baskets to the threshing-floor, and spread out on it in a layer nine to twelve inches thick. Mr. Robertson states that on the first day a heavy roller is passed over them, but this detail is not contained in Mr. Drake-Brockman's report. The crop is exposed to the dew for the night. The next day the twigs are formed into heaps, and each heap is trodden in turn, and when not being trodden is turned over and exposed to the sun to dry. This goes on for four or five days, and results in the twigs being pressed flat and deprived of a great portion of their leaves and thoroughly dried. The produce is then removed to the cultivator's house, where it is built into a stack five or six feet high, and has heavy weights placed upon it. In about a week it is packed in gunny bags and removed to the storehouse at Khandwa.

Khandwa ganja inferior to that of Bengal.

248. In outward appearance the Khandwa ganja or *pathar* differs from that of Bengal or *baluchar* in being green in colour, and having a much larger quantity of leaf left in it. It does not bear any comparison in the appreciation of smokers with *baluchar*. The latter is a very special article, and no ganja will be found to compare with it in any province. Bhang is not produced in the Central Provinces. Khandwa ganja is used instead for drinking purposes by the commoner sort of consumers. Well-to-do people import their bhang from Central India. It is, however, difficult to believe that the leaf and fragments resulting from the manufacture of Khandwa ganja do not pass into consumption at all. There is some evidence that they do. In Bengal the ganja cultivators could afford to throw away the leaves, for the wild bhang was to be got for nothing within a reasonable distance, and made better bhang than the cultivated leaf, which was consequently of no value. In the Central Provinces the case is different, and it may be doubted if the people are altogether careless of the leaf as a secondary product. There is no evidence of charas being prepared in the Central Provinces. The ganja, having passed into the Khandwa godown, is picked before issue to contractors, and again picked before issue from the tahsils, so that about 45 per cent. only finds its way into the retail shop.

Feudatory States, Central Provinces.

249. The Feudatory States prepare no drugs.

Madras.

Bhang not known as distinct from ganja.

250. In the Madras Presidency, especially towards the south, the name bhang is applied almost exclusively to the prepared drink, which may be made from the pure leaves, but is generally made from the material which is known and sold as ganja. Bhang as a distinct form of the raw drug is not known. It is even doubtful if the plant itself in the part of the country indicated is called bhang. It would seem that as the region of wild growth is left behind, the name by which the cultivated plant is known, *viz.*, ganja, comes more into general use. It will not, therefore, be necessary to mention bhang in this chapter except where it comes into the description of ganja preparation. Charas is not manufactured at all in the Madras Presidency.

251. Mr. Benson has given a description of the preparation of ganja in connection with the regular cultivation in the North Arcot and Kistna districts. The methods differ materially. "In the Javadi Hills the plants are cut and carried bodily to the village threshing floor. They are there sorted, the flower spikes and upper leaves being retained and the sticks thrown away. The selected heads are spread out for three to five hours in the heat of the day to dry, and are then loosely rolled in the hand to work out such seed as may have been formed and to break up the leaf that remains. This working also causes the spikes to stick to one another to some extent. The broken leaf is then winnowed out, collected, and powdered." The flower heads are then placed in a thin layer in a basket which has been dusted within with leaf powder, and are trodden by one or two men according to the size of the basket. After the operator has passed over the layer four or five times, it is dusted with leaf powder, and a fresh layer of spikes is put into the basket on the top of the other, and the treading is repeated. This process goes on till the basket is full. The contents are then turned out on to flat hard ground, and a stone is placed on the pile with other stones to add to the weight. The material is left thus for the night. Next morning each layer is taken off separately, broken up, and spread in the sun. Each piece is trodden and turned over from time to time. In the evening the pieces are again re-piled and weighted for the night, and the next day the process of exposure is repeated until the material is thoroughly dry. "Great importance is attached to the thoroughness of the treading, the sufficiency of the pressing, and the completeness of the drying; the quality of the drug being said to depend on the manner in which those processes are carried out. If the latter are not dried sufficiently, they appear green and are of inferior quality, good ganja being brown." When fully cured, the drug is stored in the raiyats' houses under pressure till sold.

Preparation of ganja in North Arcot.

252. In the Kistna district, if Mr. Benson is correct, the pressing is entirely neglected. The plants are cut bodily and laid out in the field for three days to dry. On the fourth day they are tied by bundles of ten and piled head and tail. "The heaps are opened and the bundles re-piled next day, the process being repeated over several days." If the quantity is small, the drying is done at the raiyat's house, but in all cases the crop is finally carried to the house. A month later the spikes are removed one by one, and spread out in the open for one night to soften and become pliable. In the morning the spikes are collected and put into large gunny bags, being packed closely therein by a man treading them down. The produce is then ready for sale.

Preparations of ganja in the Kistna district.

253. The process has been described shortly by other witnesses. They nearly all mention pressing as a part of it, though the methods may be different. Alternate exposure to sun and dew seems also to be generally practised. The drug is usually stored by consumers in earthen vessels. One witness (106) from Ganjam, after giving a careful description of the manufacture of ganja, proceeds to say that the dried leaves which have fallen out in the process are used as bhang or patti. "After carefully removing the stalks, the dried leaves are boiled in water for some time; and the boiled leaves are carefully squeezed with the hands to purge them of all filth and dirt, and then dried in the sun. The dried leaves are next boiled

Peculiar method of preparing bhang.

either in milk or cocoanut water. The quantity of milk or cocoanut water must be proportionate to the quantity of leaves boiled, so that the milk or cocoanut water might be entirely absorbed by the leaves. They are again kept in the hot sun for about three or four days. After they are well dried, they are preserved in earthen vessels for use." Similar processes were mentioned in the Bengal evidence, but they require so much care and time that they can hardly be common.

Travancore.

254. The following information seems to point to the preparation of ganja from the spontaneous growth in Travancore. It is said that *poo* ganja, or flowering ganja, is pressed together while still green so as to get matted, and when the mass begins to show signs of rotting, "it is dried in the shade and passed off in the market as *chada* ganja." *Chada—jheda* in Sanskrit—means tangled or braided, and *chada* ganja is the name of the imported article. *Poo* ganja is the local stuff, which from the description would appear to be little, if at all, cultivated. There is no other information of interest from the Madras States.

Bombay.

255. The preparation of ganja in Bombay is described by several witnesses. Mr. Ebden's (5) description, as coming from the district of largest cultivation in the Presidency, and being the most complete, may be quoted :—

"(*a*) *Ganja.*—Harvesting methods differ somewhat. In some cases the tops are pulled off by hand; in some they are cut. In some the central largest tops are collected and treated separately as first sort ganja; the central tops of side branches form second sort, and other smaller tops are third sort, and are called chur. The further process is much the same in all cases. The tops are heaped according to taste in narrow rows or in large squares about six inches thick, the different qualities when separately collected being separately heaped. The heaps are then trodden under foot. Some manufacturers tread the fresh tops at once; some let them dry first for various periods. After treading, it is turned over by hand and again trodden. The process of turning and treading is repeated at intervals of three or four days, with local variations of treatment in the intervals. In some places it is heaped in round heaps called *chakis*, and weighted at top till midnight, and then opened up and scattered and ventilated till dawn, when it is again laid out and trodden; and so on till it is judged to be ready, when it is packed in bags, and as a rule it is speedily removed by the wholesale purchaser.

"The treading-floor is sometimes prepared like an ordinary threshing-floor with clay and cowdung. I have lately witnessed the operation of treading, and in that case the floor was simple *moorum* soil on a *nalla* bank, and had undergone no preparation beyond cleaning and sweeping. The ganja was spread in squares of fifteen or twenty feet wide and about six inches thick. A line of eight or ten men danced on it to the music of a *tom-tom*. Treading began in the outer edge of the heap, and was continued in a spiral until the centre was approached, when the men fell out one by one as the space grew smaller. They followed close on one another, dancing sideways in the leader's footsteps. The *tom-tom* appeared to be highly necessary, and kept them at it.

"(*b*) *Charas.*—This is locally a bye-product which is not brought into account, but appears to be the harvesters' perquisite, who probably part with it to friends who smoke, if they don't want it themselves. It is the resinous substance that sticks to the hands or collects on the sickle when cutting or plucking the tops. The hands are now and then rubbed together, and the charas is collected in the shape of a pill, which is naturally half dirt and sweat and half charas. A piece about the size of a marble may perhaps be the reward of a day's work.

" (*c*) ***Bhang.***—This name is given indifferently to the refuse of the treading-floor where ganja is prepared, and to the produce of the seeded plants and of male plants when the crop has been grown for seed. In the latter case the tops are laid on a floor, and the seed is beaten out with sticks or trodden out by foot. The seeds are separated from the mass by means of a sieve, and the balance of broken leaves, etc., is called bhang."

The bhang crop in Gujarat is turned into drug by drying the plants and shaking or beating them so as to detach the leaves, flower, and fruit. The character of the bhang of the Bombay Presidency must be noted. When it comes from the ganja crop, it consists very largely of pieces of the female flower head, and is in fact, as many witnesses have described it, largely composed of what is known in Bengal as chur. If the customer asked for chur, the shopkeeper would produce what he calls bhang. The preparation of the drugs is generally carried out by the cultivators themselves, sometimes by contractors.

Bombay States.

256. The States in the Deccan which cultivate ganja prepare the drugs in the manner already described. In the Northern Agencies there is but little cultivation, and that of scattered plants only. There is no evidence that the flower heads undergo any preparation besides simple drying.

Aden.

257. The drugs are not prepared in Aden.

Sind with Khairpur.

Preparation of bhang.

258. The cultivation in certain districts of Sind and in Khairpur is said to be for the production of bhang only, and no doubt that is the principal product; but a small amount of superior flower heads is turned out which goes by the name of *ghundi* or *ghundi* bhang, and is occasionally used for smoking. Mr. Giles (2) states that when the crop is ripening, the upper portions of the plants are cut off and preserved separately. These are regarded as the " tit bits." They are dried with their seed and stalk, and do not appear to be subjected to any special process. They are called *ghundyun*, and are practically no doubt ganja. The rest of the crop is dried and flogged, and the broken leaves, flowers, and seed form bhang. A certain amount of this is winnowed for the seed; but the mass is sold as it is to the contractor, who seems generally to sift it and clean it of seed before retailing it.

Miscellaneous information.

259. Witness (5) from the Upper Sind Frontier, while stating that ganja and charas are not prepared in the province, gives in an appendix some information regarding the prépara-tion of these drugs elsewhere, which may be shortly noted. Ganja is prepared, he says, by burying the flower heads in a pit four or five feet deep coated with goats' dung. The pit is filled in for fifteen or twenty days, after which the ganja is taken out and sold. The consumer picks off the smokable part, crushes it, heats it on a cinder, makes it into small lumps or cakes, and smokes it in a *huka*. Charas is collected by people walking to and fro through the bhang plants with greased leather coats on, and also by going clothed only in a loin cloth with their bodies smeared with oil. The latter process is followed, he

says, in the Native States of India. He also mentions a process resembling that noticed in the Punjab, by which the dust made by beating the plant is collected on cloth. He states that this process is peculiar to Afghanistan: " And the charas imported from there is well known for its pale green colour, and is highly appreciated."

Preparation of fibre.

260. It is interesting also to note that two or three witnesses, Mr. Giles being one, report the preparation of fibre from the hemp grown in Sind. Mr. Giles says: " Sometimes, but very rarely, the thick stalks of the plant are placed in water to rot, and with great labour rope or twine is made from them by individual persons for special purposes; but the plant is never grown for the use of its fibre or of its seed only." Witness (14) states that: " The bhang plant stalks are usually buried in soft wet mud for a few days instead of being soaked in water, as in the case of the *sihata* or the *ak*." The fibre production seems to be very limited in amount, but it is worth special notice because this is the only mention of its occurrence below the Himalayas in the evidence collected by the Commission.

Berar.

261. The official memorandum gives the following description of the preparation of ganja in Berar. It is very imperfect, and the process probably resembles closely that followed in the Deccan or Khandwa: " The small outer branches are stripped off and put in towards the centre of the plant, which is then pressed with the foot (to flatten the heads), made up into sheaves, and stacked in a shed under pressure, the heaps being opened and the sheaves moved now and then to prevent their getting too hot. The leaves fall off when the plants are tied into bundles. They are collected and called bhang. The bare stalks remain with the heads in them." One witness (23) mentions the preparation by burying, which has been mentioned elsewhere. Witnesses (10) and (9) say that the crop is trodden by bullocks, which seems very improbable. It is clear that the bhang locally prepared is simply the refuse from the manufacture of ganja.

Ajmere.

262. There is nothing to show that the plant in Ajmere is subjected to anything more than a process of drying to produce bhang.

Coorg.

263. From Coorg it is stated that the female plants are cut down and exposed to the sun for a day. They are then collected into bundles and exposed to the sun by day and dew by night for three days, after which they are wrapped up in coarse cloths or *kamblis*, and so preserved. It is to be remembered that the cultivation consists only of the surreptitious rearing of plants on a small scale.

Baluchistan.

264. There is no information from Baluchistan.

Burma.

265. There is no information that the ganja of the Shan country is prepared by any other process than drying. A specimen of Kachin ganja was forwarded to the Commission, and consisted of bundles of flower tops and leaves loosely rolled together. It looked like the produce of the wild plant.

266. The details of information describing the preparation of ganja in Mysore are limited to drying in the sun and tying into bundles. Mr. McDonnell's memorandum does not give a description of the Mysore practice. What he says about the Vellore and Cocanada samples agrees with what has been learnt from Mr. Benson's bulletin.

Mysore.

267. The Director of Agriculture and Commerce gives a description of the preparation of ganja which does not differ from the method pursued in the Bombay Deccan. Bhang is the leaf and other litter which falls away in the manufacture of ganja.

Hyderabad.

268. Such cultivation as exists in Rajputana, both regular and scattered, seems to be chiefly directed to the production of bhang. Jhallawar, however, reports a production of 165 maunds of ganja, and some of the superior drug appears to be turned out in Serohi also. An inferior sort, called *makuria* ganja, is spoken of in Marwar, but appears to be little better than the female flowers of a bhang crop of the ordinary kind. It is stated in the Jaisalmir report that the ganja produced there is never prepared by treading, and from other places that the drug, whatever it may be, undergoes no process but drying. One informant states that charas is supposed to be prepared chiefly by the Bhils in Jodhpur. No foundation for this statement can be discovered. Fakirs may rub the heads of the plants they have grown in their lands and get a little charas occasionally; but even that seems improbable, as it requires a great deal of flower head to make a reasonable quantity of charas.

Rajputana.

269. Mr. Gunion's memorandum furnishes an account of the manufacture of ganja in Indore and Dewas. The processes comprise the same three principal features as elsewhere, *viz.*, drying, kneading with the feet, and removal of leaf. They occupy three or four days. In Indore the manufactured produce is kept under pressure till sold. From the description of the preparation of bhang in these States, it would seem that it is made from a crop grown for seed or bhang and not from the ganja crop. The plants are bodily dried and threshed, and the seeds are separated from "the crushed leaves and tender twigs, which are called bhang." It seems that "no charas is prepared in Central India except a little in the Bhopawar Agency for the personal use of the cultivators, or for presents from them to religious mendicants." The method of preparation is thus described by the Political Agent of Bhopawar: "Charas is prepared by rubbing ganja (sometimes mixed with bhang) violently for several hours on rough woollen blankets, which afterwards are scraped with a knife. The substance thus scraped off is first class charas. An inferior kind is then obtained by washing the blanket with the least possible amount of water, and then evaporating the liquid." The report of Gopal Ram at the close of the North-Western Provinces memorandum contains no information of special interest regarding the preparation of the drugs in Gwalior except that relating to charas as a bye-product of ganja cultivation.

Central India.

"A certain amount of charas is obtained in this (Gwalior) State by scraping off the resin which adheres to the hands in cutting the ganja plant. In tahsil Antri cultivators do not care much about the charas. In tahsil Kolarus, district Narwar, I hear charas is obtained in small quantities by the same process as in Kumaon and Garhwal."

Baroda.

270. Bhang alone is prepared in the Baroda State. It is of the same kind and prepared by the same processes as are found in the Gujarat Division of the Bombay Presidency.

Kashmir.

271. The Governor of Jammu reports that neither ganja nor charas are made there, but only bhang. The Governor of Kashmir gives an account in which the names of the three drugs are confused. He says first: "Almost all wild hemp, which is called *talia* in the Punjab, and is generally female plant in the above-mentioned tahsils, is used for the preparation of ganja locally known by name *gard* bhang (*chura* charas)." And further on—"The leaves of the hemp plant are trodden under foot, and cleaned by sieves to prepare *gard* bhang, and the process is continued until the leaves are reduced to powder and seed separated."

This describes the preparation of bhang, pure and simple; but apparently this article is known by the three names—ganja, *gard* bhang, or *chura* charas. And "it would appear that this is the stuff which is occasionally smoked. Fakirs and a few Muhammadans and Pandits of the Srinagar city and towns smoke *gard* bhang (*chura* charas).................. The total number of persons who do smoke ganja is, etc". Another informant says: "Charas is prepared in the capital cities and is termed *garda*," and he does not know if bhang is prepared. The preparation of *garda* is described, and finishes with the reduction of the material to a "resinous powder." The manufacture of *garda* or charas by the method given in the "Punjab Products" is not described by either of the only three informants. It is probable that charas is made by a further elaboration from the *garda* charas spoken of above, which is practically bhang powdered to a state of more than common fineness, and that ganja is a name borrowed from India without any correct idea of its meaning beyond that it signifies the female plant. It may be noted that the price of *garda* bhang, three pice per tola, given in the Governor of Kashmir's report, is very high for simple bhang, and seems to indicate that the article is more like charas.

Nepal.

272. The manner of preparing ganja in Nepal is somewhat peculiar. The Darbar answers report that "when the plant is in the *lata* state, it is cut down and kept in the dew for about a week, and after that each *lata* is separately wrapped in a piece of fine plantain bark, and, being tightly tied with string, is put by. Some people flatten it by pressing it under a piece of *tât* (gunny). Two or three days after this it becomes fit for use." The manufacture of charas is thus described: "The ganja plant exudes a thin gummy water. That plant is squeezed between the palms of both hands, and the gummy substance which sticks to the hands is scraped into a vessel, and is called charas." Nepal ganja, Mr. Stoker states, is introduced in small quantity into the North-Western Provinces. Nepal charas is, on the same authority, of superior quality, though the Darbar answers say that Yarkand charas is preferred in Nepal. The Deputy Commissioner of Bahraich in the report attached to Mr. Stoker's memorandum states that the export of charas from Nipalganj is about 50 maunds, and that some years ago a very much larger quantity was imported into British territory. The latter statement is confirmed by evidence from Bengal, which shows that Nepal charas is now almost superseded by the drug which comes

through the Punjab. Mr. Stoker reports that some of it passes into British Kumaon and Garhwal.

Summary.

273. It will be seen from the above detailed description that bhang, whether produced by the cultivated or wild plant, is prepared by simple drying. The processes by which ganja is prepared consist of pressing, drying, and removal of leaf. The manufacture is most perfect in Bengal. In other provinces it is not characterized by the same degree of care, and one or other of the three essential features of the manufacture is more or less neglected. Ganja collected from the wild plant and from the bhang crops of Sind, and probably also that yielded by stray cultivation, is simply dried. There are only two methods of preparing charas which appear to be used when the drug is produced on any considerable scale, *viz.*, that by rubbing the flower heads with the hands as in Kumaon and Nepal, and that described as being practised in Yarkand, which may be called the *garda* method, and consists in beating the plant over cloth, and manipulating the dust that is thus deposited. The collection of the resin adhering to hands and implements in the course of harvesting ganja is worth remembering, for it is proved in Gwalior and Bombay. The practice of the Malwa Bhils is perhaps established. Other methods are unimportant, and the common report that charas is collected by men dressed in leather moving about in the hemp crops has not been definitely located. It is doubtful if this device is employed anywhere in India.

The results of the analyses of various samples of the drugs, which have been prepared at the request of the Commission, are shown in Vol. III Appendices.

Deterioration of hemp drugs.

274. Regarding the question whether hemp drugs deteriorate or not by keeping, the Commission, for reasons which will be explained later, are unable to state definitely the precise period for which the drugs will retain unimpaired their full narcotic power under ordinary conditions of storage. A large number of witnesses have tendered evidence relative to the question whether hemp drugs deteriorate or not by keeping. The general tenor of the evidence is to the effect that the fresher the drugs, the better. Regarding ganja, Mr. K. G. Gupta, Excise Commissioner, Bengal, states that the drug is "much valued during the first year; less so in two years—in fact, is not sold after the first year if new ganja is available; absolutely unsaleable after two years." Two years may perhaps be assigned as the limit during which the drug is popularly believed to retain its narcotic properties without any very material impairment. Some witnesses, however, give a longer period. The retention of properties without deterioration of course very largely depends on the care exercised in storage.

Bhang being relatively far cheaper than the other hemp drugs, and owing to its being easily procurable for the mere plucking in a large number of districts, is probably not stored to the same extent as ganja. Mr. Gupta appears to place the limit for retention of properties between three and four years; and he makes an interesting remark to the effect that the value of bhang as a *medicine* is enhanced by age. Salig Ram, Punjab Witness No. 88, a drug contractor, states that freshly cut bhang produces great heat and is very intoxicating, while in the third year its intoxicating properties are lessened, and it goes bad.

Regarding the keeping properties of charas, the information must necessarily be inexact, as it is an imported article, and it is practically impossible for the real age of any particular sample to be known. From its physical properties charas admits of being readily adulterated, and the strikingly marked differences in the physiological value of charas resin as determined by Dr. Evans would also appear to support this view. From the various modes which appear to be adopted for the preparation of commercial charas, it must always be a drug of more or less uncertain composition, and not undeserving of the appellation—"A foul and crude drug, the use of which is properly excluded from civilized medicine," which was applied to it by the famous pharmacologists Flückiger and Hanbury. Some witnesses appear to consider that charas is perhaps more stable than ganja. Gujar Mal, Punjab Witness No. 93, a drug vendor for twenty years, states that charas is very strong during the first year; after that it gradually loses its strength until the fourth year, when it becomes quite useless. Some witnesses refer to the deterioration being more rapid in the plains than at hill stations. A witness refers to charas produced in Bokhara which can be kept for six years in India without going bad.

Causes of deterioration.

275. The causes of the deterioration of ganja and bhang are usually ascribed to (*a*) damp and natural decay; (*b*) ravages of insects, and also popularly (*c*) to volatilization of the narcotic principle. Regarding the two first causes of deterioration, they are common to all vegetable substances; but the third cause is not tenable because hemp resin on which the narcotic property of the drug depends is non-volatile. There is no doubt, however, that by prolonged exposure to air the aroma of the drug is dissipated to a considerable extent, the aroma being due to the presence of a volatile oil. The popular view of the value of ganja is based on its physical appearance, and very largely also on its aroma; but it does not necessarily follow that because the aroma has been lost, the drug is therefore weaker in narcotic property; but it may be less pleasant to smoke than ganja which has retained its bouquet. The mere effluxion of time without other disturbing factors, such as damp, as a cause of the impairment in the narcotic value of the drug is a point of some interest. In medical circles there is a fairly general idea that the extract of *Cannabis indica* is an uncertain drug, and this is believed to be due to variations in age of the preparations which have been prescribed. This assumption may or may not be correct. Dr. Evans' experiments indicate that the physiological values of similar doses of all alcoholic resinous extracts from various ganjas are not the same, and, moreover, individual idiosyncrasy on the part of the patients as influencing the action of the drug has perhaps not been always recollected. The alleged diminution in power of the drug by effluxion of time might be ascribed as being really due to a slow oxidation process, and that this might readily occur in ganja is explicable. But as regards the extract of *Cannabis indica*, direct oxidation would only occur superficially in the stratum exposed to air. But there is no evidence of any value to prove that ganja, which has been carefully protected from damp, and say five years old, is not as active physiologically as the fresh drug. The value of ganja for use has always hitherto been determined solely by its physical appearances. With evidence of mould and the effects of continued damp, the physical appearances are sufficient for an opinion to be arrived at; but when those signs of deterioration are absent, mere loss of aroma,

as has been already mentioned, is not necessarily evidence that the drug has undergone diminution in narcotic power. Further, there is no scientific evidence that any oxidation or other changes ever occur in alcoholic extracts of hemp by which the physiological value of the drug could be diminished. While fully admitting the possibility of oxidation altering the physiological activity of the drug, there is also the possibility—if the drug does diminish in strength by keeping—of the same change being caused by a mere molecular alteration in the constitution of the resin. But against the idea that any change does occur in physiological strength by keeping, there is the probability that different samples of the extract of *Cannabis indica* have been used by various observers ; there is the individual idiosyncrasy factor, and Sigmund's dictum that the older the preparation of *Cannabis indica* is, the stronger it is.

Rules regarding deterioration.

276. So far as the Commission have been able to ascertain, in two provinces only, Bengal and the Central Provinces, are there any rules regarding the destruction of ganja alleged to have become unfit for use. In Bengal the rule regarding stocks in the Ganja Mahal is to the effect that any ganja left unsold on the expiration of two years in the houses of the cultivators or in a public gola shall be destroyed. Regarding stocks in the warehouses of wholesale vendors, the rule is to destroy all ganja classified as unfit for use once a year, the request of the goladar to classify any ganja as unfit for use being ordinarily accepted (Excise Manual, Section XX, clauses 22 and 54). In the Central Provinces rules for the management of the Khandwa ganja storehouse, rule 11, dealing with deposit of ganja in the store, enjoins that, if any ganja deposited in the storehouse be at any time condemned by the Deputy Commissioner as unfit for use, it shall be liable to be destroyed under the orders of the Deputy Commissioner, with the previous approval of the Commissioner of Excise. There can be no doubt that in the plains the preservation of ganja from deterioration by damp is a matter of very considerable practical difficulty. The loose manner of packing the drug, which leaves a large surface exposed to the action of damp, and the generally inefficient arrangements for storing it, make the difficulty very great. The general absence of special precautions for the protection of the drug may well lead to such general deterioration as quite adequately to explain the prevailing popular opinion and to justify the rules in force on the subject.

Dr. Prain's experiments in packing.

277. From Dr. Prain's report on the cultivation of ganja, the Commission learn that certain experiments are in progress connected with the packing of ganja in hermetically sealed tins. From a communication received from Dr. Prain, the Commission understand that certain of the experiments have proved a failure so far as the physical appearance of the drug is concerned. The Commission have been informed that in the Central Provinces a few years ago similar experiments were instituted with equally unsatisfactory results. Ganja contains a very appreciable amount of moisture, and it is well known that vegetable substances, such as leaves, etc., unless first desiccated before being packed in hermetically sealed vessels, invariably undergo marked deterioration. Dr. Prain's suggestion to have the drug compressed in the form of cakes commends itself as being simple and a very marked improvement on the present method of placing the drug in the market in several forms. It is recognized that powerfully compressing vegetable drugs

in the form of tabloids lessens deterioration by exposing a smaller surface to the action of damp and air. The proposed system would also lessen very materially the bulk to be stored and facilitate transport. It would most certainly prevent to a great extent volatilization of the essential oil on which so much of the popular commercial value of the drug depends, and it would also to a great extent prevent the illicit drug from passing into the market.

CHAPTER VII.

TRADE AND MOVEMENT OF THE HEMP DRUGS.

Bengal.

278. The area cultivated in the Ganja Mahal in the year 1892-93 was much greater than in any one of the preceding 19 years, being 3,540 bighas (Excise Commissioner's Memorandum), equivalent to 1,180 acres. But the estimated outturn of the crop was comparatively small, being only 7,575 maunds, and not much above the average of the five years from 1888-89 to 1892-93, 7,317 maunds (Excise Report for 1892-93, page 36). For the purpose of examining the movements of the produce, therefore, 1892-93 is a fair average year.

Exports of ganja.

279. Bengal exports ganja by land to Assam, Kuch Behar, Nepal, and the North-Western Provinces, and by sea to London, British Indian ports, and places outside India. The figures for 1892-93 are—

	Maunds.
To Assam	681
Kuch Behar	89
Nepal	177
North-Western Provinces	563
London	128
British Indian ports	275
Foreign ports	89
Total ...	2,002

None of these figures is in a very striking degree abnormal. The exports to Assam and Kuch Behar are taken direct from the head-quarters at Naogaon, and the rest apparently from the local stores most convenient to the trade. The balance left for home consumption is 5,573 maunds, which approximates to the annual consumption. One of the most noticeable points in the information relating to exports is the extraordinary shipment of 774 maunds in the year 1891-92 to other parts than those for which the Commission asked for information by name in the statement. This export was ten times the ordinary quantity, and no explanation is furnished about it.

Exports of ganja to North-Western Provinces.

280. The history of the export trade to the North-Western Provinces is also remarkable. It is sketched at page 38 of the Excise Report for 1892-93. It is there stated that the ganja trade of Rajshahi with the North-Western Provinces dates from the very earliest period of the cultivation, and that the export was very large till the year 1860, when the rate of duty was first increased. "The order requiring payment of duty at Rajshahi may be said to have killed the trade of that district with the North-Western Provinces. The exports which in 1854-55 amounted to 6,036 maunds, and to 4,250 maunds in 1861-62, fell in the following year to 1,014 maunds, to 43 maunds in 1863-64, and ceased altogether in 1869-70." The North-Western Provinces traders have since imported a certain amount of ganja from the golas of the Patna Division, and it is probable that by this arrangement they save in carriage something more than the difference between the cost of the drug at the central and local golas. Their average total purchases for the last three years, *viz.*, 565 maunds, are, however,

very far below the quantity they used to buy in Rajshahi, and it is clear that the North-Western Provinces have found other sources of supply to meet their wants.

Imports of ganja.

281. A certain amount of ganja is imported under license from the Tributary States of Orissa, but the Commissioner of Excise reports that the quantity is not large, as little advantage has yet been taken of the rules passed in March 1892 to legalize the import. For the previous decade the importation had been entirely forbidden under orders of the 21st June 1882. Smuggling from the States is, however, carried on on a considerable scale. This and a small amount of illicit import over the Nepal frontier are practically the only sources of the ganja supply of the province besides the produce of the Ganja Mahal and such material for smoking as the wild growth and illicit cultivation provide. It may be noted that in the year 1878-79 a small amount of ganja was imported from Bombay and the Central Provinces. The experiment has not been repeated.

Bhang and charas.

282. The Excise Commissioner reports that bhang is not as a rule imported from any other province, and no figures are furnished. But the Excise Commissioner, North-Western Provinces, states that a certain amount does pass from his province into Bengal, and there is general corroboration of this statement in the evidence. Charas is imported from the Punjab. Formerly, it seems Nepal charas was generally consumed, but it never could have been largely imported, for the total import for the year 1880-81 was less than half a maund. The trade in charas seems now to be steadily growing. A duty of Rs. 8 a sér has been levied on the drug since 1880, and the import is now 11½ maunds.

Kuch Behar.

283. The Kuch Behar State imported 89 maunds of ganja in the year 1892-93. Though somewhat higher than that of the three preceding years, the figure is not abnormal. It exports none of the hemp drugs, and none are licitly produced.

The Tributary States of Orissa.

284. Though the Bengal Government has passed regulations under which the drugs can be exported from the Garhjat States, and though there is considerable demand for them, there is practically no licit trade. The illegal traffic is considerable, but its volume cannot be estimated. Within the States the consumers appear to grow their own drugs, and there is no organised trade.

Political States of Chota Nagpur.

285. There is no trade worth mention in the Chota Nagpur States. All the States probably import ganja to a certain extent, for cultivation has been more or less restricted in all of them; but there is definite information to this effect from Seraikela and Kharsawan alone. The former State has furnished statistics in the form prescribed by the Commission showing an import of 1½ maunds of ganja. It is nevertheless probable that many consumers grow their own drugs. There are no exports of the drugs except perhaps in the shape of very petty smuggling.

Hill Tippera.

286. There is no trade in the drugs in Hill Tippera. An insignificant amount is imported for consumption, and there is some petty smuggling into British territory towards Bengal and Assam.

287. Assam draws its ganja supply from Rajshahi. The figures of import are given from 1879-80 to 1892-93. The average import of the first four years of this period was 644 maunds, of the next five years 677 maunds, and of the last five years 750 maunds. The trade therefore is growing, and the increase is doubtless connected with the development of the tea industry in Assam and the influx of coolies attending it. The drug is not exported. There is reason to suppose that the consumption of licit ganja, and therefore the import trade, is affected by the smuggling of inferior ganja from the hill countries and by the existence in the valleys of the wild growth in considerable abundance; but it is not possible to form any estimate of the extent of this interference with the legitimate business. Charas is not consumed. Licenses are not issued for the import of bhang probably because there is no demand for Bengal bhang, the local weed being far more than sufficient for the needs of the province. Nor is there any local trade in bhang. Practically bhang is not recognized as a distinct article from ganja. There is very little information about its use.

Assam.

288. The province produces for itself a large amount of bhang and a very small amount of ganja and charas. A considerable quantity of bhang is nevertheless imported, and practically the whole of the ganja and charas consumed are from outside the province. All three drugs also pass out of the province, but ganja and charas only to a small extent.

North-Western Provinces.

289. Mr. Stoker writes that the three main localities from which ganja is imported are Bengal, Khandwa, and Central India, *i.e.*, (*a*) Gwalior, and (*b*) Bundelkhand Native States. The Bengal Excise Report for 1892-93 shows that the export from Bengal to the North-Western Provinces in the last three years has been—

Ganja imports.

	Maunds.	Average maunds.
1890-91	667	
1891-92	467	565
1892-93	563	

It is nearly all brought from the golas in the Patna Division. The imports from Khandwa (Excise Memorandum) were—

	Maunds.	Average maunds.
1890-91 ...	1,530	1,490
1891-92 ...	1,450	

These figures together account for an average import of 2,055 maunds. The total imports of the province were—

	Maunds.	Average maunds.
1890-91	4,920	
1891-92	4,239	4,774
1892-93	5,165	

or more than double the quantity which is drawn from Bengal and Khandwa.

The Bengal drug, *baluchar*, is universally admitted to be of superior quality. Mr. Stoker writes: "The appearance would indicate that it contains more of the resinous secretion; but, so far as I know, it seems to be preferred on account of its flavour and less unpleasant after effects." It was exported to the North-Western Provinces in 1854-55 to the amount of 6,036 maunds, and in 1861-62 of 4,250 maunds, and then the export rapidly decreased to the present average on account of the heavy duty imposed by the Bengal Government. These figures appear to show that the North-Western Provinces formerly drew its whole supply of ganja, or nearly all, from Bengal, and that the imports of ganja given in the statistical return are not in excess of the annual supply which the province requires. It is advisable to draw attention to these figures because Mr. Stoker cautions the Commission against placing too much reliance on his statistics.

Gwalior the principal source of supply of ganja.

290. Taking the average import then at 4,774 maunds—Mr. Stoker estimates it at 4,000 to 4,500 maunds—it must be concluded that 2,719 maunds, or the greater part of it, are imported from Gwalior and the Bundelkhand States. The Bundelkhand States named by Mr. Stoker are Dattia, Sampthar, Chatarpur, and Kadaura (Baoni), to which he would add Dholpur in the Bhartpur Agency. He is not sure that all the ganja brought from these States is of local growth. Some of it, he suspects, comes from Gwalior or Khandwa originally. From other sources it is ascertained that Dholpur does not grow any ganja. Regarding the volume of the import for the Bundelkhand States, Mr. Stoker writes that it is inconsiderable and irregular. Gwalior must therefore be the locality from which nearly the whole of the balance of import now under consideration is derived. And in this view it becomes the most considerable source of the ganja supply of the province, larger than Khandwa, and far larger than Bengal. It is reported that a little ganja still comes from Indore. It is to be noted that in certain years the Khandwa imports have been uncommonly large. In 1883-84 they were 2,472 maunds, in 1885-86 4,223 maunds, and in 1889-90 3,237 maunds. These figures, of course, raise the importance of Khandwa as compared with Gwalior, but still they do not affect the conclusion that the latter provides the greater amount of ganja to the North-Western Provinces at the present day. Mr. Stoker thinks Gwalior ganja is gaining ground, and that it has been favoured by the construction of the Indian Midland Railway.

Khandwa and Gwalior ganja inferior to that of Bengal.

291. As regards quality, Mr. Stoker's information places Gwalior ganja on the same footing as the *pathar* of Khandwa, and it is known by the same name. Both these drugs are far cheaper than that of Bengal with its high duty, and this appears to be a sufficient reason for their having superseded it. In the retail trade *pathar* sells at 1½ annas, while *baluchar* sells at 6 annas the tola. There is reason to believe that *pathar* is frequently passed off as the better quality of drug, and is used also for adulterating it. The form in which the drug is sold in the shops, the smokable part being picked off the stems, renders such practices possible. The two articles are readily distinguishable on the branch. Mr. Stoker has some interesting remarks on attempts which have been made, apparently with more or less success, to get the cultivators of Nimar to turn out their drug so as to resemble *baluchar*. The latter is consumed principally in the districts of the Gorakhpur and Benares Divisions, but a little of it still finds its way further west, where its superior quality secures for it a certain, though small,

demand in spite of its much higher price. The name *pathar*, *pathiyara*, or *pathiyala* may possibly be derived, Mr. Stoker thinks, from the leafy character of the inferior drug.

Other sources of ganja supply.

292. It is mentioned that within the last ten years ganja has been imported from Holkar's Territory, Berar, Mewar, Nasik, Nasirabad, and Khandesh, and perhaps other places in the Bombay Presidency; but latterly "the proximity of Khandwa and Gwalior, and the cheapness of the drug there, seem to have given them a monopoly of the business in *pathar*." The smuggling of inferior ganja from over the Nepal frontier is too insignificant to interfere with the trade. The registered exports are not considerable; some imported ganja goes from Bahraich into Nepal.

Import of charas.

293. The charas used in the North-Western Provinces is almost wholly the produce of Yarkand and Bokhara obtained through the Punjab. Nepal also supplies from 25 to 50 maunds. The total import is given as 2,251 maunds. This is far in excess of any previous record, but Mr. Stoker advises caution against placing too great reliance on these statistics, and states that he has only recently established a system of registration which can be expected to give at all accurate results. The figure is probably unduly enhanced by the partial registration of transports within the province. In such registration the district exports must have failed to appear, for the total export of the year is only given at 45 maunds. In the correspondence of 1881 the Board of Revenue estimated the consumption at only 1,000 maunds, and it cannot be supposed that it has doubled since that time. Mr. Stoker's estimate of the imports, *viz.*, 1,100 or 1,200 maunds, may be adopted. Some interesting information is furnished in a letter of the British Joint Commissioner of Ladakh which appears in the correspondence of 1881. That officer states that the charas which comes into India by the Ladakh road is produced in Eastern Turkestan, *viz.*, Yarkand, Yengi Hissar, Kashgar, Khotan, etc. This is regarded as inferior to the charas of Bokhara, which is carried through Kabul to Peshawar, and through Kandahar (in ordinary times) to Shikarpur in Sind. The charas of Yengi Hissar, which is the best of the kinds produced in Eastern Turkestan, is frequently sent through Khokand to Bokhara, and thence imported with Bokhara charas, and sold under that name. The great bulk of the charas sent through Ladakh to India is consigned to Amritsar. Amritsar is the chief depôt of charas, and the North-Western Provinces supply would seem to be drawn from that place. The traders have informed Mr. Stoker that the drug is much less pure than it used to be some years ago, and also much cheaper. The *Shāhjahani* or *Saljahāni* charas from Nepal is of very superior quality, and commands as high a price as Rs. 10 a sér. It seems all to go to Lucknow, where it is retailed at Rs. 35 to Rs. 40 per sér. The import has fallen off in late years in consequence of Yarkand charas having become cheaper, but its superior quality still secures a market for it.

Charas produced in the Himalayas.

294. Charas is manufactured to the extent of about 50 maunds in the mountains of Kumaon and Garhwal from the crops cultivated for fibre. It is for the most part consumed locally, but 5 or 6 maunds pass annually into the hands of the contractors. It would appear that a small amount is exported to Tibet. This

district also receives small imports from Tibet and Nepal. It is said that the people prefer Yarkand charas to their own, and Mr. Stoker cannot understand in what, except cheapness, the superiority of the latter can consist, for the home produce must be far the purer of the two. Some charas is prepared from the wild growth, but it is doubtful if it enters the market. It may, however, affect the trade by satisfying the wants of a certain class of consumers. There is still another source of charas in the province, though it is not yet drawn upon except by the hillmen who come down to cultivate in the Kumaon Terai and the Bhabar. The wild growth of this region is made to yield the drug of which Mr. Stoker had succeeded in getting a specimen. The quantity made and used is quite insignificant, and does not appear to find its way into the market; but the possibility of preparing the drug from the wild growth of the low country is interesting.

Export of charas.

295. The export of charas is only 45 maunds. It probably passes into Bengal and the Native States on the southern frontier; but there is no definite information. The figure may not mean exports from the province, but it is reasonable to expect that there should be a little trade in the directions indicated.

Import and export of bhang.

296. The imports and exports of bhang are given as 1,644 and 1,263 maunds respectively. It may be doubted if these figures have any value at all as representing the volume of trade over the frontiers of the province. The mass of the bhang trade of course circulates within the province, and consists in providing the locally grown drug to local consumers. Regarding the external trade, Mr. Stoker writes: "A certain amount is imported from the Punjab, coming chiefly from Jagadhri, Kalsia, and Umballa, and some from Amritsar and Hoshiarpur. Nearly all of it goes to a few of our western districts. This is not because of any failure in the local supply, which is unlimited and inexhaustible, nor because of any superiority of the Punjab article, but apparently on account of the trade connection of some of the contractors with the Punjab............ A little bhang also comes from Bhartpur and Jeypore, and perhaps from a few Bundelkhand Native States; but in that direction we give more than we get. The amount is not considerable, and seems to be diminishing. Some of the bhang from Gonda and Bahraich is really grown on the Nepal side of the border..................... A certain amount of bhang finds its way out of the provinces to the neighbouring districts of Bengal, the Punjab, the Central Provinces, and the Bundelkhand States." It appears that the contractors often buy the plant from the owners or occupiers of land who have collected and stored it. The purchase money would seem to include a price for the drug itself as well as payment of the expenses connected with collecting and storing it.

Rampur.

297. There is no separate information regarding the trade arrangements of the Rampur State. They form part of the general trade of the province. The amount of the State's imports and exports cannot appreciably affect the course of the latter.

Tehri Garhwal.

298. The same remarks apply to the Hill State of Tehri Garhwal, with the addition of the definite information that none of the products of the hemp cultivation carried on in the State passes over its frontiers into British territory.

299. The comparatively unimportant subject of the bhang trade may be disposed of in a few words. The mass of the bhang consumed is collected within the province mostly from the wild growth. There is a considerable import from over the Kashmir frontier which, the Excise Commissioner remarks, may be regarded as local production, for the plant is collected at no great distance from the border. There is a small import from the direction of Kabul also. It has been seen that a certain quantity of bhang passes out into the North-Western Provinces. It is probable that the bhang produced from cultivation is mostly consumed at home, and that very little of it, if any, passes on to the market. The amount shown as sold by retail vendors approaches 4,000 maunds.

Punjab.

300. Nearly the whole of the charas supply of India comes through the Punjab. The Excise Commissioner estimates that in 1892-93 the total import amounted to 5,000 maunds; that this was an exceptional year, and that in ordinary years it is between 3,000 and 4,000 maunds. When examining the trade of the North-Western Provinces, information was quoted from the Joint Commissioner, Ladakh, about the kinds of charas which pass under the names of Bokhara and Yarkand, and the routes by which the two articles are imported into India. The Joint Commissioner, in this case Captain Ramsay, reported to the Financial Commissioner, Punjab, in August 1888, on the subject of the charas trade. In this report he writes: "Charas is produced chiefly in the vicinity of Yarkand. It grows at Bokhara and other places in Turkestan, but I have been informed that the Russians have prohibited its cultivation within their dominions, and that supplies of the drug are now obtained almost entirely from Yarkand territory. The finest charas does not find its way into Ladakh, but is exported to Bokhara and other places." He proceeds to give some interesting details of the trade: "The reported value of the charas is fictitious for this reason that the Yarkandis bring their charas to Leh, and there meet Indian traders who take their charas in exchange for piece-goods and other Indian articles. Each party over-values his goods, hence the reputed value of both charas and piece-goods, etc., is from 10 to 20 per cent. in excess of the real value." He then shows that the trade has a strong spice of gambling about it: "It will be observed that the fluctuations in the price of charas are very great, and this fact has led two of my predecessors and myself to express opinions hostile to the fostering of this particular branch of our Central Asian trade on the ground that all charas dealings partake rather of the nature of a gambling transaction than of legitimate trade. The price fixed for charas at Leh is almost entirely speculative. The charas is intended for sale in the Punjab, but none but license-holders are permitted to sell charas there; the consequence is that when merchants take their charas to the Punjab, they are obliged to sell it for such price as the license-holders will pay. The charas cannot be kept in India, as it goes bad after a year, and it cannot be taken back on account of the cost of transport. The down country license-holder is therefore in a position to fix the price of the drug. Nevertheless large profits are sometimes made on charas taken down for sale, and thus the trade continues to thrive." These remarks appear to be just, though it may not be correct to say that charas goes bad in quite so short a time as one year. The charas having arrived at Leh, and having apparently passed into the hands of Indian traders, is taken to the Punjab by two routes, *viâ* Kashmir and *viâ* Kulu.

Import of charas.

The ganja, *gard* bhang, or *chura* charas manufactured in Kashmir is all consumed locally; none is exported to the Punjab (Kashmir Governor's Memorandum). The Kashmir authorities take precautions to see that the Yarkand charas passes through with bulk unbroken, and they levy duty on any that may be sold in Srinagar. The import by this route may be roughly stated at 500 maunds. Six or seven times as much is imported direct through Kulu to Hoshiarpur, and during the last three years the amount has grown considerably. The figures for the last three years are—

	Maunds.
1890-91	2,201
1891-92	3,242
1892-93	3,932

The figures quoted by the Excise Commissioner from the Provincial Reports of external trade show that the Kabul route is also used for the import of charas, but no imports were apparently registered in 1890-91 and 1891-92. In discussing the value of these figures, the Excise Commissioner remarks that no drug is shewn as coming across the western frontier (from Sewestan) or the north-western (from Bajaur) except that from Kabul, while there is undoubtedly a certain amount of import trade with the Derajat and Hazara. This implies that to the west of the Kashmir route there are several roads from Hazara round to the Sind frontier by which charas enters the Punjab.

The figures of import and export given in the form prescribed by the Commission are obviously incorrect; the same drug must frequently have been registered more than once. The estimated import is 5,000 maunds. The registered consumption as shown in the statistical tables is 1,020 and 1,026 maunds for 1892-93 and 1891-92 respectively. But the figures seem to be merely the differences between the imports and exports, and cannot be otherwise verified. It would hardly be an excessive estimate to put the amount consumed in the province at 1,200 maunds. This leaves 3,800 maunds for export, of which, according to Mr. Stoker, the North-Western Provinces would take another 1,200 maunds. The balance, 2,600 maunds, must go in waste, and be exported to the rest of India. It must be remembered that the imports of charas in 1892-93 were exceptionally high, being 1,000 or 1,500 maunds above the normal. With this allowance the consumption by India outside the two northern provinces seems to come within limits which accord with the general information regarding the habits of the people. A not insignificant share must be taken by the Native States of the Punjab, where the charas habit is as prevalent as among the population of the British portion of the province.

301. The following morsels of information regarding the Native States under the Punjab Government have been furnished. The State of Nabha prohibits the sale of ganja and charas, and only allows the sale of bhang for medicinal purposes. Faridkot imported in the last year 40 maunds of bhang and 12 maunds of charas. Jhind has imported on the average of two years 105 maunds of bhang and 52 maunds of charas from Umballa and Hoshiarpur. Chamba reports that it imports the hemp drug from Hoshiarpur and Amritsar, and that the average consumption of the whole year is about 8 maunds. There is a small import of Yarkand charas through

Punjab States.

Bashahr. The distribution of the hemp drugs to the States would seem to be a subordinate incident of the Punjab trade.

Central Provinces.

302. The Central Provinces grow their own ganja, consume no charas, and import a trifling amount of bhang.

Quantity of ganja produced.

303. Mr. Drake-Brockman gives 16 maunds as the average outturn of an acre of ganja cultivation (Memorandum on Cultivation). Mr. Robertson puts it at 12 to 15 maunds (Memorandum on Cultivation). These estimates must take account of a great deal of material that does not find its way on to the books of the Khandwa depôt. For paragraph 54 of the Excise Memorandum gives figures which would put the outturn at hardly 10 maunds. The quantity of ganja brought to store and the quantity exported since 1888-89 are given in that paragraph as follows :—

	Quantity stored.	Quantity sold for export beyond Central Provinces.	Difference.
	Maunds.	Maunds.	Maunds.
1888-89	9,450	5,052	4,398
1889-90	10,854	7,933	2,921
1890-91	7,224	4,108	3,116
1891-92	6,685	3,916	2,769
1892-93	6,686	4,233	2,453
Total ...	40,899	25,242	15,657
Average ...	8,179	5,048	3,131

Mr. Drake-Brockman writes that only one-fifth of the crop is locally consumed, but this statement does not take account of waste. The average recorded consumption, including that of the Feudatory States, is shown to be 1,282 maunds. The column headed "difference" represents this provincial consumption, together with waste in cleaning, principally the drug consumed in the province, but also to a less degree that which is exported.

Export of ganja.

304. Of this export the North-Western Provinces take about 1,500 maunds, and the destination of the rest is indicated in a report of the Excise Commissioner of the year 1887 quoted at paragraph 41 of his memorandum: "The part played by the Khandwa store as an *entrepôt* for the supply of the ganja demand of these provinces is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, Gwalior, Rutlam, Dhar, Jodhpur, Udaipur, Rewa, Panna, Baroda, and other States of less note, and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivator's stock." At that time the Commissioner of Excise states that the export was between 6,000 and 7,000 maunds. In making this calculation, he includes the figure of the year 1885-86, which reached the exceptional amount of 13,380 maunds.

There is reason to suppose that a little business is done in the sale of seed from the crops grown at Khandwa for that product. There is information as to

its being used by the hemp cultivators of Hyderabad, the Berars, Bombay, and Indore. There is some smuggling of ganja from the Native States on the borders of the province, but it does not seem to be considerable enough to materially affect the licensed trade. Bhang is imported from Central India to the extent of about 10 maunds for the use principally of Marwari traders. It is difficult to believe that the leaves of the hemp cultivated at Khandwa and the fragments from ganja manufacture do not pass into use as bhang ; but there is no evidence that they do. The Excise Commissioner thinks that the high maximum (20 tolas) for legal possession of bhang affects the licensed import by enabling consumers who travel to bring in the drug for themselves. "Considerable quantities," he says, "are introduced by post also."

Feudatory States, Central Provinces.

305. The Feudatory States and some zamindaris administer their own excise. These are all under engagement to buy their ganja from British wholesale vendors. Their imports are steadily growing, and amounted in 1892-93 to 273 maunds (paragraph 66, Excise Memorandum). Khairagarh and Sonepur alone have sent reports, and they show that their imports are increasing, and are now over 20 maunds each. None of them apparently exports any ganja, though from the position of some of them on the frontier, and the presumably superior quality of Khandwa ganja over that of ganja yielded by ruder methods of cultivation, they might have been expected to do so. But the Native States and Madras zamindaris beyond the frontier all more or less grow their own ganja, and the Dewan of the Sonepur State says that the locally grown article is preferred. There may, however, be some petty export to the Chota Nagpur States, for the British authorities of that division have succeeded in restricting cultivation in them.

Madras.

306. The Excise memorandum and the statistics give no information about the imports and exports of ganja or the quantity produced in the Presidency. Of the other forms of the raw drugs, charas does not appear to be used, and bhang is but rarely recognised as a distinct article from ganja. Of these, therefore, nothing need be said in the present connection.

Probable amount of ganja produced.

307. In order to form an idea of the extent of the traffic in ganja, it is necessary to hazard an estimate of the outturn of the cultivation throughout the Presidency. The area has been estimated at 350 acres of regular cultivation, to which must be added the cultivation of the homestead and desultory kind. The Bengal Excise Report of 1892-93, page 36, gives the average outturn per bigha as $3\frac{1}{5}$ maunds, or something less than 10 maunds an acre. In the Central Provinces it appeared to be much the same figure. Mr. Benson, when giving evidence orally, said that the people of North Arcot and Kistna had both told him that the crop came out about 420 lbs., or $5\frac{1}{4}$ maunds to the acre, but he had not been able to test the statement. Except the fact that a higher outturn is got in the Ganja Mahal and at Khandwa, there is no apparent reason why this should be regarded as an unduly low estimate. For the reason stated, however, it may be raised to 6 maunds. And it will be proper to add one maund for the fragments from the manufacture which go to make bhang. The 350 acres of regular cultivation would at this rate, 7 maunds per acre, yield 2,450 maunds. The less systematic cultivation, accompanied by

probably less skilful manufacture, may perhaps be estimated to yield 2,000 maunds. The total outturn would thus be 4,450 maunds.

308. There is definite information of the following exports in 1892-93:—

Exports of ganja.		Maunds.
To Mysore (average of three years, Mysore statistics)	...	540
To Bangalore (average of seven years, Bangalore Memorandum)		57
To Coorg (average of two years, Coorg Memorandum and Statistics)	... ...	21
By sea (Government report)	... ...	58
Total	...	676

leaving a balance of 3,774 maunds. There is probably some licit importation into Hyderabad from the Northern Sircars, though it would appear from the Hyderabad evidence to be small; and a certain amount of smuggling not only into Hyderabad, but also to Orissa, the Central Provinces, and Burma. Mysore probably gets some illegal addition to its registered imports. The amount left for consumption in the Presidency and the Native States subordinate to it can hardly exceed 3,500 maunds. And it must be remarked that in the case of Madras ganja, there is not less waste than in the Khandwa drug as far as the Commission can judge. The consumers, therefore, do not probably get a larger share of this produce for actual use than the consumers of the Central Provinces do of the portion of their produce which stays at home. The export to Burma, there is reason to believe, is considerable. The Commission were informed in Burma that the drug came in considerable quantity from Pondicherry and ports on the Madras coast. All this export would appear to be Madras ganja.

Madras States.

309. Travancore and Pudukottai appear to import their hemp drug. In Travancore the cultivation is prohibited, except possibly in the wildest of the hill tracts, and it does not appear that there is any regular cultivation in Pudukottai. The consumption of the latter State is about 7½ maunds, which probably represents the average import. It is estimated that the share of the rent of the opium and bhang farm of the State creditable to the hemp drug is Rs. 5,000, while the revenue of Pudukottai is Rs. 260. The Government of the latter State seems to undertake a more direct and detailed management of its hemp excise than the former does, and probably therefore gets a higher rate of revenue upon it. The consumption or import of Travancore is therefore probably less than would be indicated by a calculation based on a comparison of the revenue of the two States. It may be estimated at about 100 maunds. The State of Banganapalle is reported to cultivate 2·2 acres, and produce therefrom 320 maunds of ganja valued at Rs. 800. The outturn is impossible. Either the State imports a considerable amount of ganja, or its cultivation is much more extensive than reported. The revenue of the Sondur State from the farm of ganja, opium, and snuff is Rs. 31, and there can be no trade in the hemp drug worth mention.

Bombay.

Probable amount of ganja produced.

310. The Collector of Ahmednagar states that the outturn of ganja cultivation is 4½ to 7½ maunds per acre according to soil and season. Of two Satara witnesses, one puts the outturn at 6¼ maunds, and the other at 8 maunds. A fair average

of these figures is 6½ maunds. On the average of the last five years, the cultivation of the Deccan and Southern Maratha Country, including the Native States, is about 1,100 acres, which at the above rate would yield 7,150 maunds of ganja. The cultivation in the other parts of the Presidency proper is insignificant, and yields only bhang. The whole of the Presidency, including Cutch, Kathiawar, and the other Political Agencies, draws its ganja supply from the Deccan. Baroda also comes to the same market, and so do Sind and Aden.

Statistics of sale unreliable. Estimate of consumption.

311. The registered retail sale of the British districts (excluding Sind) is on the five years average 2,120 maunds. This ought to be near the amount of actual consumption, for imports of ganja are compared with the passes on arrival of consignments at the district head-quarters, the taluka, or the village, and the accounts of the retail vendors and their stocks are inspected from time to time by the District and Abkari Officers (Excise Memorandum, paragraph 8). The Commissioner of Customs, Salt, Opium, and Abkari states also (paragraph 14, Excise Memorandum) that the reports from all districts are unanimous that smuggling of these drugs is to all intents and purposes unknown, and he explains why it should not be worth the people's while to engage in illicit practices. But unfortunately it is found on examining the district figures that the provincial total is got simply by adding them up, and that in no less than nine districts there is no registered sale whatever in the year 1892-93. Large districts like Dharwar and Satara are thus imperfectly represented, and the average is falsified by the fact that in other districts the figures for the full quinquennium are not brought into the account. The actual average consumption is evidently very much in excess of 2,120 maunds. Another large addition must be made to the recorded sale on account of the waste which accompanies the handling and distribution of the less highly manufactured ganja found outside Bengal. With these corrections the consumption of British districts alone will account for not less than 3,000 maunds of the total production.

Ganja supplied to Native States.

312. A few States and some of the Agencies have sent figures of imports and consumption which exceed a total of 1,000 maunds. Only one State of Kathiawar is represented in this list—Junagadh. The important State of Kolhapur has no statistics to give. Baroda also would appear to import Deccan ganja to the amount of about 400 maunds. The consumption of all the Native States which import Bombay ganja cannot be much less than double the amount which has been reported.

Transport and import of ganja.

313. In British territory the district contractors, and sometimes the holders of smaller farms (Excise Memoramdum, paragraph 8), import on their own account from the places of production. These are all retail vendors. There is only one merchant in the Kolaba district who engages on the wholesale business, and probably the supplies for Sind and other places on the sea board pass through his hands. The farmer for the Bombay district appears to import for himself. It would appear from the Excise memorandum that some ganja is imported from the Central Provinces. It seems to be brought into Khandesh, but there is no evidence that it goes beyond that district. Some may possibly go as far as Nasik. But both in Khandesh and Nasik the cultivation is almost sufficient to

supply the demand of those districts. The import from the Central Provinces cannot be large.

Exports by sea.

314. It will be seen from the following statement that there is a considerable export of ganja by sea. Something less than one-half of the whole goes to British Indian ports, several of which are probably in the Bombay Presidency. A little more than a quarter finds its way to foreign Indian ports, which would include those of Cutch and Kathiawar. There is not, however, any definite information of the Indian ports, British and foreign, to which the drug is carried. As much of the drug as is imported into the Presidency and its Native States has, of course, been included in the above survey of import and consumption. About 28 per cent. goes to Aden, Arabia, Africa, and Europe. The export to London is very considerable. There is no reason to suppose that any of the sea export consists of other than Bombay ganja.

Export of ganja from ports in the Bombay Presidency for 1890-91 to 1892-93.

Year.	From what port.	To British Indian ports.	To Foreign Indian ports.	To Aden.	To Muscat.	To Zanzibar.	To London.	To Liverpool.	To Marseilles.	Total.	REMARKS.
1890-91	Bombay	116	948¾	16	...	22	560	124½	...	1,787¼	The figures are Indian maunds.
	Other Bombay ports ...	1,202	16	...	...	...	...	...	...	1,218	
	Total ...	1,318	964¾	16	...	22	560	124½	...	3,005¼	Complete information for previous years not available.
1891-92	Bombay	126½	832	30	24	18	1,055	67	30	2,182½	
	Other Bombay ports ...	1,390	47	...	...	...	...	..	...	1,437	
	Total ...	1,516½	879	30	24	18	1,055	67	30	3,619½	
1892-93	Bombay	195	623	32	48	26	700	...	...	1,624	
	Other Bombay ports ...	1,345	147	...	...	...	...	...	...	1,492	
	Total ...	1,540	770	32	48	26	700	...	...	3,116	
	Total of 3 years ...	4,374½	2,613¾	78	72	66	2,315	191½	30	9,740¾	
	Average ...	1,458	871	26	24	22	771	63	10	3,246	

Distribution of ganja produced in the Presidency.

315. The result of this survey of the distribution of the ganja produced in the Bombay Presidency is as follows :—

	Maunds.
Consumed in British districts	3,000
Consumed in Native States	2,000
Exported by sea...	1,500
Unaccounted for	650
Total	7,150

316. Bhang occupies such a position in relation to ganja in the Bombay Presidency that it is hardly possible to examine the traffic in it separately. In the Northern Division the cultivation may yield 150 maunds, which would not be more than sufficient to supply the local demand. The bhang produced in Baroda, a very small amount, is not exported. The bhang which generally passes by that name consists of the fragments of leaves and flower head which come away in the manufacture of ganja. If figures had been complete and trustworthy, ganja and bhang might have been put together, and treated as one article of trade. It did not appear advisable to deal thus with a total consumption of only 44 maunds in the year 1892-93, a figure which a comparison with previous years shows to be incorrect. It does not appear that the sale of bhang as a distinct article from ganja exceeds 150 maunds a year in the whole Presidency, excluding Sind. The sale is only registered in the Northern Division and in Khandesh. Mr. Almon states that some of the Surat bhang finds its way to Bombay, and Mr. Campbell mentions import from Palanpur.

Bhang.

317. Charas is only used in Bombay City to the extent of 7 or 8 maunds a year. Seven sérs only were sold in Poona for the first time in 1892-93. The drug is imported from Amritsar and Hoshiarpur.

Charas.

318. The information is not complete enough to make it worth while to examine the individual trade of the Native States. The above general survey of the Presidency supplies the broad fact that all the States get their supply of ganja from the Bombay cultivation. The States in the extreme north of the Presidency, especially Palanpur, grow a little bhang for themselves, and this State may export some of its own growth to Bombay; but it cannot be much. Some of the southern States probably export part of the produce of the cultivation mentioned in Chapter IV.

Bombay States.

319. In Sind bhang takes the place of first importance among the three hemp drugs. Cultivation for the production of this drug amounts to 262 acres on the average of the last five years. The outturn calculated at something under 12 maunds an acre is 3,000 maunds. A high rate is adopted because the whole crop, except the actual sticks, goes into the product. The Excise Reports of 1891-92 and 1892-93 show the sources from which the various districts of Sind get their supplies of the drugs. All the districts, except the Upper Sind Frontier, would appear to consume locally grown bhang. The retail sale on the average of the last five years is 4,539 maunds, so the local production does not cover the consumption. But it is possible that this figure includes transport within the province. The Upper Sind Frontier district would appear to import the drug from the Punjab and Khelat. The statement regarding Khelat may be doubted, for there is very little cultivation there according to the information furnished to the Commission.

Sind.

320. The imports of ganja average 55 maunds, and the retail sale 22 maunds. It is mostly brought through Karachi from Panvel in the Kolaba district of the Bombay Presidency, where there is a wholesale business carried on in the ganja grown in the Deccan.

Import of ganja.

Some little may be imported from Cutch, but that also is in all probability the same ganja moving by a different route. The districts of Karachi and the Upper Sind Frontier would appear from the statistics to consume none of it, and Shikarpur very little; but the registration of the sale in Karachi is obviously imperfect. It was to be expected that the districts of Upper Sind should in respect to the consumption of ganja resemble the Punjab, where the drug is not smoked.

Import of charas.

321. The average import of charas is 70 maunds, and the registered retail sale 24 maunds. Amritsar seems to be the source of supply. Though the drug is said to be brought from Afghanistan, Yarkand, and Khorassan, there is no information of any direct import over the Sind Frontier on the west. The Karachi figures of retail sale are again wanting, and the drug would appear to be little used in Thar and Parkar. But the latter district appears to be more addicted to opium. The Acting Commissioner in Sind (Colonel Crawford) suspects some smuggling of charas and ganja from Jaisalmir through Thar and Parkar, and some illicit import of bhang from Khairpur into surrounding districts. Neither traffic appears to be at all extensive. In the last two years there has been a trifling export of 10 maunds of ganja by sea from Karachi.

Khairpur.

322. The Khairpur State grows 84 acres of bhang, which would yield about 1,000 maunds. The registered retail sale was three and four years ago 1,800 and 1,500 maunds; it is entered at 276 maunds for 1892-93. The figures cannot be correct. The statistics give no imports of ganja or charas, or any consumption of these drugs. Nor is there any record of export of bhang in the last three years. It is probable that some charas is used, but it may well be that ganja is but rarely smoked.

Berar.

323. The average area of cultivation in Berar is 60 acres, which by the Khandwa standard would yield something over 500 maunds of ganja. The imports, which come from Khandwa and some from Khandesh, are estimated at 800 maunds (Excise Memorandum). These supplies "are apparently sufficient for the requirements of the people who indulge in this drug." No exports are recorded, and it is stated that there are none. The cultivation in Khandesh has become so reduced that it is doubtful if any ganja comes from that district now. Charas does not appear to be used, and no sale of bhang distinct from ganja is recorded.

Ajmere.

324. The statistics of Ajmere give no figures of import, export, or retail sale. Very little of the hemp drugs is produced locally, and that only in the form of bhang. It is therefore safe to say there is no export. The Assistant Commissioner and Collector of Excise Revenue reports that ganja and charas are imported usually from the Punjab. This is probably true of charas, but the Punjab produces no ganja, and this drug must come from elsewhere, Gwalior being the most convenient, and therefore the most probable, source of supply.

Coorg.

325. In Coorg there is practically no local production of the hemp drugs. The average import of ganja from the figures of two years is 74 maunds of 28 lbs. each, or 21 Indian

maunds. The average of registered consumption is two-thirds of this amount. The drug imported would seem to be grown in the Madras Presidency. Charas is not used, nor is bhang regarded as a distinct article from ganja.

326. The information from Baluchistan does not enable the Commission to judge of the extent of the trade in the province. The farms in two divisions—Bolan and Quetta-Pishin—fetch over Rs. 4,000 each; but it is not clear that these do not include the right to sell other intoxicating drugs besides the hemp products. There is practically no local production of the drugs. It would appear that the consumption of bhang and ganja are about equal, and that of charas is twelve times as great as either.

Baluchistan.

327. There is no legitimate trade in Burma. The smuggling which is carried on on a considerable scale will be dealt with more appropriately in connection with prohibition and excise arrangements. A few facts may be noted in this place. It appears from the information collected that the contraband article is introduced from ports on the Madras coasts, amongst which Pondicherry is prominently mentioned. The volume of the smuggling cannot be estimated. The Financial Commissioner reports the following detections:—

Burma.

	1890-91.	1891-92.	1892-93.
	Tolas.	Tolas.	Tolas.
Rangoon	8,423	9,771	13,115
Moulmein	932	213	92
Akyab	245	567	1,018
Bassein	0	0	0
Total ...	9,600	10,551	14,225

And the Assistant Collector of Customs reports for 1893-94 (1st April to 30th November) tolas 30,353, or nearly 10 maunds. This is probably but a fraction of the total imports. The smuggling into Upper Burma from the Shan States and Kachin Hills is probably insignificant in quantity.

328. The figures of import and retail sale of ganja on the five years' average are respectively 400 and 300 maunds. The drug is brought principally from North Arcot. There is reason to think that some comes into the northern districts from Dharwar in the Bombay Presidency and from the Hyderabad State. There are no exports. Charas is not used, and bhang is not distinct from ganja. The latter remarks apply also to Bangalore, where the average import of ganja is 57 Indian maunds. This also comes from the Madras districts. There appear to be no exports.

Mysore.

329. The report of the Hyderabad State shows that "charas is almost unknown in the whole dominion." Bhang is a bye-product of ganja cultivation and manufacture. The

Hyderabad.

cultivation extends to between 300 and 400 acres. The Director of Agriculture states that the outturn may be taken to be 5 or 6 maunds per acre. The total produce of the State would then be about 2,000 maunds. The memorandum states that the local production is sufficient to meet the requirements of the people in ordinary seasons. It is only in abnormal years that exports to, or imports from, British territory take place. The average of these for the last five years is 75 maunds of import and 10 maunds of export.

Rajputana.

330. The Rajputana States appear to grow most of the bhang they require, and to import ganja and charas. The trade in charas is mostly in the hands of travelling Kabulis, called in these parts Vilayatis; but bhang and ganja are transported by the local traders of all grades, from Marwaris in a large way of business to Tambolis (*pan* sellers) and grocers. The following facts about the trade in some of the States are reported:—

Kotah.—A small quantity of bhang is locally produced. Ganja is imported from Jhallawar, Gwalior, and Tonk. No charas has been imported for some years.

Jhallawar.—About 140 maunds of ganja and 26 of bhang are said to be produced locally. About 90 maunds of bhang and ganja are imported and 105 maunds exported annually. The returns do not distinguish between the two drugs. There is no information about charas.

Jeypore.—It is reported that 10,000 maunds of bhang are produced locally. It looks as if the figure was a clerical error, for the export from the State is small, and the local consumption cannot be very enormous. This amount would represent 1,000 acres of cultivation, and the account of the cultivation does not justify the belief that there is anything approaching that area. Bhang of a superior kind is imported to the amount of 64 maunds; of ganja 54 maunds and of charas 129 maunds are brought in from the Punjab; 27 maunds of bhang are exported.

Kishengarh.—Ganja and bhang are locally produced to a small extent, but they are both also imported,—the former from Malwa, and the latter from Jeypore. Charas is also imported. Figures are not given. There are no exports.

Bikanir.—Some 13 maunds of bhang are produced locally, but no ganja or charas. The three drugs are all imported from the Punjab, Indore, and Jeypore. The bhang, which seems to come through Bhartpur, is called *thatia*, probably the same word as *tatia*, the name of the bhang produced in Farakhabad and Hardoi, derived, as Mr. Stoker explains, from a village of the name in the former district. Charas is of two kinds, Indori and Yarkandi; the former name would indicate manufacture in Indore, of which there is no decided proof. The only places in Central India where there is information of any manufacture of this drug are Gwalior and Bhopawar. The import of charas appears to be about 16 maunds and of ganja 4. It is possible that this ganja is what is known in the State as Indori charas; for the two drugs are mixed up in the accounts, and in one place it is stated that there is no import of ganja. Of bhang, 126 maunds are imported.

Kerowli.—The imports are small: ganja to the extent of 10 maunds from Gwalior, bhang to the extent of 2 maunds from Jeypore, and charas in very small quantity from the town of Bhartpur. A little ganja and bhang, 3 maunds of each, are exported. Bhang is locally produced in small quantity. The trade appears to be carried on at a fair which is held on the Shivratri.

Alwar.—The small quantity of bhang which is grown locally is almost sufficient for the wants of the State. It is supplemented by occasional import as required. Ganja is neither grown nor imported. There is an annual import of 6¾ maunds of charas. There is no export of any of the drugs.

Dholpur.—There is no local production. Some 39 maunds of ganja are imported from Antri in Gwalior, half a maund of charas from Agra and Patiala, and 34 maunds of bhang from Kanauj, Chapra, Mhow, and Kerowli. Exports of 16 maunds ganja, 12 maunds bhang, and one quarter maund charas are shown.

Serohi.—The State imports 32 maunds of ganja, but no bhang or charas. There are no exports. It has been stated in a previous chapter that there is a certain amount of bhang and ganja produced in the State. The temples of Mahadeo draw revenue in kind from the hemp drug traffic, and there is probably a large consumption in connection with the holy places on Mount Abu.

Jaisalmir.—Ganja and bhang are locally produced to the extent of 33 maunds. There is no export or import.

Jodhpur.—Besides a small local production of ganja and bhang, the former drug is imported from Indore and the latter from Bhartpur. Charas is supplied by contractors in Ajmere. The imports are annually 49 maunds of bhang and 173 maunds of ganja and charas; the exports 5 maunds of bhang and one of ganja and charas.

Bundi.—The local production supplies only a small amount of bhang. The imports, especially of bhang, are extraordinarily high, and would seem to indicate that the State is more or less of an *entrepôt* of the trade. Ganja goes by two names, Indori and Shahbadi, the latter being probably that imported from Ujjain. The figures of average annual import are—bhang 9,385 maunds, ganja 100 maunds, and charas 25 maunds. There are no figures of export to support the hypothesis that the traffic passes through the State in large measure.

Shahpura.—Ganja and bhang are reported to be brought from Bhilwara, and the former drug is called Indori ganja. These names would point to the country west of Indore as the place of production. The local production of bhang is 125 maunds, and both imports and exports figure at 25 maunds.

Tonk.—The imports and exports are small, and the local production does not appear to be considerable. The figures of import are ganja 10 maunds, bhang 3 maunds, and charas less than 1 maund.

Bhartpur.—The State imports about 57 maunds of charas and 350 maunds of bhang, and exports about 5 maunds of the former and a trifling amount of the latter.

331. The information about production and trade in the Central India Agency is far from complete.

Central India.

Indore.—The cultivation of the Indore State is on the average about 115 acres, which would hardly yield 1,000 maunds of ganja. Mr. Gunion puts the figure for ganja and bhang together at 900 maunds. There is an average import of 153 maunds of ganja and 7 maunds of bhang, and an export of 377 maunds of ganja. The volume of transport within the State is 452 maunds of ganja and 399 maunds of bhang.

Dewas.—The yearly output in Dewas is reported to be 156 maunds of ganja and 64 maunds of bhang derived from 30 acres of cultivation.

Gwalior.—The memorandum on cultivation in the Gwalior State gives a total area of 400 acres. This might yield as much as 3,500 maunds of ganja and bhang together. These drugs are largely exported to the North-Western Provinces and the States of Rajputana and Central India.

Other States.—There is no information as to the production in other States of the Agency, or the volume of their trade in the hemp drugs.

Indore, Gwalior, and the Central Provinces appear to be the main sources of ganja supply for the whole of Central India and Rajputana and the North-Western Provinces. The evidence and general information tend to show that Indore and Khandwa are being supplanted by Gwalior, though Khandwa still exports largely. As in Rajputana, so in Malwa, charas is for the most part imported from the Punjab by Kabuli traders. Rewah is said to get its supply from Patna. The Indore statistics show no import of this drug. A small amount is said to be made in Gwalior as a bye-product of the ganja harvest, but it must be quite inconsiderable.

332. The average area of cultivation in the Baroda State is about 11 bighas or 6 acres, of which the outturn is 76 maunds of bhang. It appears that early in 1892 the system of administration was reformed. Exports have consequently ceased, and the nature of the statistics is now materially different from what it was before the change. In the first year of the new order of things the trade was probably disorganised, and it will therefore be better to refer to the figures of 1892-93 alone. These show an import of 214 maunds of ganja and 31 maunds of bhang. The retail sales of ganja in the same year were 438 maunds and of bhang 143 maunds. The ganja would appear to have come from the Deccan, and the bhang may have been partly supplied by Gujarat; but there is no clear information on the point. There is an export of 91 maunds of ganja entered against the Baroda Division, but there is nothing to show that it went out of the State. Charas is not used in the State. It may be noted that the change in the system of administration above referred to consists in the establishment of depôts in which all imports have to be stored, and from which they can only be removed under permit, and apparently a great increase in fixed duties.

Baroda.

333. The whole of the ganja or *gard* bhang or *chura* charas which is prepared in Kashmir, about 70 maunds, is consumed locally. A considerable quantity of bhang is carried away from Jammu into the Punjab. The quantity is not ascertainable. It

Kashmir.

appears to be gathered near the Punjab frontier. The traffic in charas from Leh through Srinagar has been noticed in connection with the Punjab imports. It would seem that the goods do not ordinarily change hands or break bulk in Kashmir.

Nepal.

334. The exports from Nepal into the North-West Provinces have been noticed. It is probable that a small amount of Nepal charas still finds its way to Calcutta. There may be a little smuggling of ganja into Bengal, but it cannot be important. On the other hand, the Bengal statistics show that Nepal took in 1892-93 177 maunds of Bengal ganja.

CHAPTER VIII.

EXTENT OF USE AND THE MANNER AND FORMS IN WHICH THE HEMP DRUGS ARE CONSUMED.

Bengal.

Quality of statistics.

335. In endeavouring to measure the extent to which the hemp drugs are used, it will be best to deal with them in their simplest forms of ganja, bhang, and charas. The excise administration of the hemp drugs in Bengal is so systematic that the statistics of registered sale to retail vendors may be accepted as correct; and with regard to ganja and charas, they will be found to afford a very good indication of the actual consumption. With bhang the case is different, for most of this drug which is consumed outside the big cities escapes excise altogether. And the cities in which it can with any approach to truth be said that unexcised bhang is not consumed are very few.

Ganja is the most important of the three drugs; it contributes nearly the whole of the hemp drug revenue, and is consumed in all parts of the province. In the case of Bengal it is possible to form with the help of the statistics a fairly accurate idea of the extent to which the use of it prevails in the various divisions and districts. On this subject a statement appears in the Excise Report for 1892-93: "Its consumption is largest in Calcutta, and next in Myménsingh and Dacca; it is also considerable in the 24-Parganas, Rangpur, Pabna, Tippera, Cuttack, Puri, and the districts of Behar"; and the qualification is added that the large apparent consumption in Behar is to be explained to some extent by export to the North-Western Provinces.

Consumption compared with population of ganja.

336. If the quantity sold in each division and district be compared with their population, it will be found that the divisions rank as follows (the figures of 1892-93 are taken)—

Presidency	...	...	...	.	1 maund to	9,000
Bhagalpur	...	...	...	.	" "	10,000
Dacca	...	...	...	.	" "	12,000
Orissa	...	...	...	..	" "	15,000
Rajshahi	...	...	...	.	" "	17,000
Patna	...	...	...	..	" "	19,000
Chittagong	...	...	...	..	" "	23,000
Burdwan	...	...	...	..	" "	25,000
Chota Nagpur...		...	...	..	" "	30,000

and that the districts in which one maund does not suffice, or barely suffices, for 10,000 of the population are:—

Calcutta	...	...	...	...	1 maund to	1,400
24-Parganas	...	...	...	...	" "	10,000
Jalpaiguri	...	...	...	..	" "	9,000
Darjeeling	...	...	...	..	" "	10,000
Dacca	...	...	...	..	" "	8,000

Mymensingh	...	...	...	...	1 maund to	8,000
Shahabad	...	...	...	...	" "	9,000
Monghyr	...	...	...	...	" "	9,000
Bhagalpur	...	...	...	...	" "	8,000
Purnea	...	...	...	...	" "	9,000
Puri	...	...	...	...	" "	10,000

Consumption of ganja in Calcutta.

337. The circumstances of Calcutta are of course altogether abnormal. It contains a vast number of coolies and day labourers, and workers in boats and on the river-side, besides a large foreign population, many of whom, such as domestic servants, porters, and watchmen attached to Government offices, to houses of business, and to private persons, and the followers of wealthy people, are notoriously addicted to the hemp drugs in one form or other. There are also present in the city all the conditions which tend to luxury and excess. The evidence shows that the use of ganja by some of the well-to-do classes is by no means rare, and the probability is that with people who have acquired the taste and can afford to gratify it freely the indulgence is not stinted either to themselves or their friends. Calcutta, therefore, not only contains amongst its population an unusually high proportion of consumers, but the consumers also take considerably more than the average individual allowance.

Consumption of ganja in the districts.

338. The districts where the consumption is highest come far behind the city of Calcutta. The favour in which the drug is held in the 24-Parganas is probably due in great measure to the neighbourhood of Calcutta; but it is also in evidence that the inhabitants of low and swampy tracts and the river population are specially addicted to it. Similar reasons, Dacca being a large city, may account for the high consumption of the districts of Dacca and Mymensingh. The shops in Darjeeling, Jalpaiguri, Shahabad, Monghyr, Bhagalpur, and Purnea very probably get a good deal of their custom, besides the recorded export, from beyond the frontiers of Bengal. Puri is a great resort of religious mendicants and similar people who are the most determined consumers of ganja. In other directions it is difficult to account for the great difference in the rate of consumption, as shown by the retail sales, in districts which adjoin one another, and in which very similar physical and economic conditions apparently prevail. Why, for instance, should Dinajpur be abstemious, lying as it does in the midst of districts which all show a full average consumption? It may be due to the absence of large rivers and of riverside population. But this explanation will not apply to Noakhali, which shows the smallest sale in the whole province, and is situated between Tippera and Chittagong, the former of which the Excise Commissioner regards as a district of heavy consumption, and the latter being not very exceptional in this respect. The consumption of opium and liquor is also very low in Noakhali.

Tracts in which different degrees of use prevail of ganja.

339. The figures of retail sale mark off large continuous tracts, which can be distinguished from one another by their degrees of consumption, though it may not be easy to account for the differences between them. Thus the consumption is consistently

low throughout the four hill districts of the Chota Nagpur Division, the comparatively high rate of Lohardaga being due in all probability to the fact that Ranchi, the head-quarters of the division, has a considerable population of foreigners. Manbhum in the Chota Nagpur Division, Bankura and Midnapur in the Burdwan Division, and Balasore in Orissa form the skirt of the south-western hill tract, and are content with one maund of ganja for every 25,000 of the population. There is probably a certain amount of smuggling from the Hill States into these districts, but it can hardly be sufficient to affect their character as ganja consumers in the comparison now being made. North-east and east of Calcutta lies a huge tract of low consumption, comprising the districts of Noakhali, Khulna, Jessore, Nadia, Backergunge, and Faridpur. This fact hardly bears out the theory that residence in low-lying country and river-side life are very intimately connected with the ganja habit. In the districts situated immediately west and north-west of Calcutta, and in the Rajshahi Division and in Malda, the consumption is about average. Further west, in the Patna Division, the consumption falls off.

Area of heavier consumption of ganja marked off.

340. The province might possibly be divided into two portions so as to indicate consumption above and below the average. A straight line drawn from Monghyr on the Ganges to Raipura on the Megna in the Noakhali district, and turned north and east at the respective ends direct to the frontiers of the province, would mark off broadly the portion in which consumption exceeds one maund to 15,000 of the population. It would include all the river population on the Ganges and Brahmaputra between the two places named. South and west of this line there would be found only Calcutta, the 24-Parganas, and Puri with consumption exceeding the above figure.

Incidence of consumption in the whole population.

341. The consumption of the whole province, including Calcutta, is one maund to 13,000 of the population, and excluding Calcutta one maund to 14,000. This maund consists of the drug as issued from the local golas, while the figures of consumption given by witnesses represent the quantity of the detached pieces of ganja as they are manipulated for use. Allowing for the waste between the gola and the *chillum*, it will be fair to put the consumption at one maund to 16,000 of the population.

Individual consumption of ganja.

342. The Excise Commissioner reports that the average retail price of ganja is Rs. 20 per sér. It ranges from Rs. 12 in Calcutta, Patna, Cuttack, and Chittagong to above Rs. 30 in Mymensingh, or from 2½ annas to more than 6 annas per tola, the average being 4 annas. It appears from the evidence that $\frac{1}{10}$th of a tola is the smallest quantity that will suffice for one *chillum*, and that more is required if more than two or three smokers have to partake of it. That quantity apparently affords one smoke to two persons, and the refreshment seems to be generally taken twice a day. For the most moderate habitual smokers, therefore, $\frac{1}{10}$th of a tola may be taken as the daily allowance. This represents an expenditure of ¼ anna a day and a yearly allowance of 23 tolas. But Mr. Gupta reports, and he is corroborated by the great bulk of the witnesses, that the average allowance is higher than this, lying between ¼ anna and ½ anna per diem. Accepting this opinion, the daily cost to the moderate consumer may be put at 4½ pies, and the

yearly allowance at 35 tolas. In order to frame an estimate of the total number of consumers who are supplied by the yearly sale of excised ganja, the excess allowance of excessive consumers has to be added to this figure.

Proportion of excessive consumers of ganja.

343. The following very clear statement on the subject of moderate and excessive consumption may be quoted from the evidence of Babu Gobind Chandra Das, Deputy Magistrate and Collector of Malda :—

" I have taken some statistics on this point. The ganja shop at this town of English-bazar sells ganja at the rate of Rs. 20 a sér. I enquired of a large number of persons who come to purchase ganja at this shop as to their daily consumption of their drug. Altogether 378 persons were examined. Of these, 247 persons stated that they spent a pice (¼ anna) a day on this drug, 106 persons gave 2 pice (½ anna) as their daily expenditure on ganja, whilst only 13, 7, 1, 3, and 1 stated their daily consumption to be 3 (¾ anna), 4 (1 anna), 5 (1¼ annas), 8 (2 annas), and 10 (2½ annas) pice respectively. I am sure most of these men understated their consumption to a very considerable extent. But looking to the fact that purchasers of ganja are not the only persons who consume the drug, and that a large number of persons who consume ganja do so at the expense of their richer companions, I think it is safe to say that the majority of ganja smokers do not spend more than two pice (½ anna) a day upon ganja. The retail price of ganja in this district is about Rs. 20, so that two pice (½ anna) can fetch a man only ⅛th tola of ganja. This is not sufficient for more than three *chillums*. I think it cannot be considered as excessive. On this datum it can be said that the majority of the ganja smokers are moderate consumers. As regards occasional consumers, all that can be said is that their number is extremely small. In fact, it is impossible for a man to consume even a pretty large quantity unless he is a habitual consumer and has kept up the habit by daily use."

This estimate of daily moderate consumption is rather higher than has been adopted above on consideration of all the available evidence; but the witness's general conclusions appear to be sound. The extremely small proportion of excessive consumers is corroborated by many witnesses who have devoted care and thought to the question, though it falls below the estimate of the bulk of those who have contented themselves with simply putting down their opinions in figures without discussion or comment. The witness quoted does not make special mention in this place of the religious classes. He states elsewhere (answer 20) that the number of a special class of them in his district is about 1 in 100 souls, which is not a small proportion. The addition of the other classes of religious ascetics and mendicants will give a considerably higher ratio, and the district will then have a full average proportion of these people. They have probably therefore entered into the enquiries and calculations of the witness which may be accepted as fairly representative of all classes of consumers, including that which is notorious for excessive use of the hemp drugs.

The standard of average moderate consumption of ganja.

344. The excessive consumers then must be regarded as bearing but a small proportion to the moderate—certainly not more than 5 per cent, or 1 to 20. And this accords with reason, for the bulk of the consumers of ganja are poor and cannot afford over-indulgence in a luxury which, in Bengal at all events, is not cheap. The yearly consumption of a moderate individual has been estimated at 35 tolas, and distributing the excess amount taken by immoderate users over the whole number of consumers, the individual allowance for a year may be put at 40 tolas, which is half a sér or one-eightieth of a maund. By this measure

the number of consumers of excised ganja is easily calculated, and is shown in the attached statement.

Division.	District.	Population.	Maunds of ganja sold in each district.			Number of persons per maund.	Number of consumers at the rate of 40 tolas per annum.	Percentage of consumers to population.
			Sold.	Exported.	Balance for local consumption.			
Burdwan ...	Burdwan	1,391,880	70	...	70	19,000	5,600	·4
	Bankura	1,069,668	22	...	22	48,000	1,760	·2
	Birbhum	797,833	45	...	45	17,000	3,600	·5
	Midnapur	2,631,516	71	...	71	37,000	5,680	·2
	Hooghly	1,076,710	60	...	60	17,000	4,800	·4
	Howrah	721,211	32	...	32	22,000	2,560	·4
	Total ...	7,688,818	300	...	300	25,000	24,000	·3
Presidency ...	24-Parganas ...	1,892,033	174	...	174	10,000	13,920	·7
	Calcutta	874,450	592	...	592	1,400	47,360	5·4
	Nadia	1,644,108	39	...	39	42,000	3,120	·2
	Jessore	1,888,827	50	...	50	37,000	4,000	·2
	Khulna	1,177,652	42	...	42	28,000	3,360	·3
	Murshidabad ...	1,250,946	58	...	58	21,000	4,640	·4
	Total ...	8,728,016	955	...	955	9,000	76,400	·9
Rajshahi ...	Dinajpur	1,555,835	52	...	52	29,000	4,160	·3
	Rajshahi	1,313,336	71	5	66	19,000	5,280	·4
	Rangpur	2,065,464	115	...	115	17,000	9,200	·4
	Bogra	817,494	43	...	43	19,000	3,440	·4
	Pabna	1,362,392	99	...	99	13,000	7,920	·6
	Darjeeling	223,314	21	...	21	10,000	1,680	·8
	Julpaiguri	681,352	73	...	73	9,000	5,840	·9
	Total ...	8,019,187	474	5	469	17,000	37,520	·5
Dacca ...	Dacca	2,420,656	271	...	271	8,000	21,680	·9
	Faridpur	1,797,320	73	...	73	24,000	5,840	·3
	Backergunge ...	2,153,965	64	...	64	33,000	5,120	·2
	Mymensingh ...	3,472,186	393	...	393	8,000	31,440	·9
	Total ...	9,844,127	801	...	801	12,000	64,080	·7
Chittagong ...	Chittagong	1,290,167	62	...	62	20,000	4,960	·4
	Noakhali	1,009,794	14	...	14	72,000	1,120	·1
	Tippera	1,782,935	100	...	100	17,000	8,000	·4
	Total ...	4,082,896	176	...	176	23,000	14,080	·3
Patna ...	Patna	1,760,004	434	279	155	11,000	12,400	·7
	Gaya	2,138,331	93	...	93	22,000	7,440	·3
	Shahabad	2,063,337	321	113	208	9,000	16,640	·8
	Muzaffarpur ...	2,711,445	108	39	69	39,000	5,520	·2
	Darbhanga	2,801,955	129	32	97	28,000	7,760	·3
	Saran	2,467,477	233	134	9	24,000	7,920	·3
	Champaran ...	1,859,465	178	78	100	18,000	8,000	·4
	Total ...	15,811,014	1,496	675	821	19,000	65,680	·4
Bhagalpur ...	Monghyr	2,036,021	243	32	211	9,000	16,880	·8
	Bhagalpur	2,032,696	241	...	244	8,000	19,520	1·0
	Purnea	1,944,658	228	29	199	9,000	15,920	·8
	Malda	814,919	64	...	64	12,000	5,120	·6
	Sonthal Parganas ...	1,754,196	79	...	79	22,000	6,320	·4
	Total ...	8,582,490	858	61	797	10,000	63,760	·7
Orissa ...	Cuttack	1,937,671	113	...	113	17,000	9,040	·5
	Puri	944,098	92	...	92	10,000	7,360	·8
	Balasore	994,625	37	...	37	26,000	2,960	·3
	Total ...	3,877,2[illegible]4	242	...	242	16,000	19,360	·5
Chota Nagpur	Hazaribagh... ...	1,164,321	30	..	30	38,000	2,400	·2
	Lohardaga ...	1,137,331	50	...	50	22,000	4,000	·4
	Palamau	596,770	14	...	14	42,000	1,120	·2
	Singhbhum	545,488	13	...	13	41,000	1,040	·2
	Manbhum	1,193,328	43	...	43	27,000	3,440	·3
	Total ...	4,637,238	150	...	150	30,000	12,000	·3
	GRAND TOTAL ...	71,271,080	5,452	741	4,711	15,000	3,76,880	·5

Number of consumers estimated.

345. A fair average consumption for the whole province, exclusive of the Native States, is 5,000 maunds, and this suffices for 400,000 smokers at the above allowance. The number of smokers in the total population of 71,271,000 is thus something over one-half per cent. In Calcutta and the 24-Parganas together the smokers number more than 2 per cent. of the population. In the heavy consuming districts of Dacca, Mymensingh, and Bhagalpur they are about 1 per cent. In only a few other districts in the divisions of Rajshahi, Bhagalpur, Patna, and Orissa do they exceed one-half per cent. Smoking is practically confined to adult males. Assuming that these are one-quarter of the total population, the smokers do not number more than one man in 50 over the whole province. The above calculation of the daily and yearly allowance does not probably err on the side of excess, and it follows that the estimate of the number of consumers is rather over than under the mark. It is to be noted that Babu Hem Chunder Kerr estimated the consumption per head at 1½ sérs per annum, or three times the amount here adopted. At the average price of ganja, Rs. 20 per sér, the Commission's estimate of half a sér is equivalent to a yearly expenditure of Rs. 10, and it is not likely that the poor people, who form the great bulk of the consumers, could afford more than this amount.

Extent of use of bhang.

346. The use of bhang does not admit of a similar survey being made, because the wild plant grows in such quantity over a large part of the province, and passes into consumption freely without the intervention of the Excise Department. Excised bhang is sold in eight out of the nine divisions, the exception being Rajshahi; but in three other divisions—Dacca, Chittagong, and Orissa—the quantity is quite insignificant. In the Bhagalpur Division the sale is probably confined to the towns of Monghyr, Bhagalpur, and Deoghur in the Sonthal Parganas, which is a religious resort, and, all told, it is very small. There is an appreciable amount sold in Hazaribagh and Palamau of the Chota Nagpur Division, which would seem to show either that the hemp plant is not cultivated in the States of that Agency to any great extent, or that, if cultivated, it is not easily accessible to the people of these districts. From the evidence of direct restriction in these States, the former of these alternatives appears to be the fact. In the Burdwan Division also there is a certain sale. But Calcutta with the 24-Parganas, Patna, and Gaya are the only places where the excised drug finds any considerable market. There is a large sale in Shahabad of the Patna Division. The Collector's evidence would show that in this district, which contains the important city of Arrah, the hemp habit is more than commonly prevalent. But it is probable that, as in the case of ganja, there is some export to the North-Western Provinces.

Use of bhang in parts of the province.

347. The evidence shows that the occasional use of bhang in the form of drink is almost universal with Hindus, and that its regular use is uncommon among the inhabitants of Lower Bengal, but very prevalent among the people of Upper India. The habit is accordingly found to increase towards the frontier of the North-Western Provinces. All that the statistics can be held to show is that there is no sale for the excised drug where the wild growth is abundant. They are no guide as to the comparative prevalence of the habit in various parts of the province. Such deductions as can be made in the districts where the wild growth is absent or rare confirm the evidence that the habit of bhang drinking is uncommon

with the Bengalis. Under these circumstances it is not worth while, even in these districts, to attempt to measure the prevalence of the habit with more exactness.

Individual consumption of bhang.

348. But the evidence throws some light on the amount of individual consumption, and the statistics of Calcutta may prove interesting. The average total consumption of bhang in Calcutta during the last 5 years has been 440 maunds, which is about one maund to 2,000 of the population, or somewhat less than the rate of ganja consumption measure for measure. The retail price of the drug is about Rs. 2½ or Rs. 3 per sér (memo. and witness 123). The daily allowance is very irregular. It is stated by Babu Hem Chunder Kerr that moderate use ranges from ⅛ tola to 2 tolas a day, and by others that ¼ tola is the usual allowance, and that even this small amount is sometimes made to last for two or three days. The explanation of this irregularity is probably to be found in the facts that the drug is cheap, that it is not very potent, and large doses do not therefore produce unpleasant consequences; that the preparation of the drink is somewhat troublesome and inconvenient; and that the intermittent and occasional use as a cooling draught is common.

A yearly allowance of 2⅓ sérs represents a daily use of little over ⅛ a tola in quantity and ¼ anna in price—figures which appear reasonable and in accordance with the evidence. At this rate the yearly sale of Calcutta would supply about 7,000 persons. There are many consumers, especially up-country people, who take more than the allowance on which this calculation is based. But, on the other hand, the above number must be multiplied by a high figure if it is sought to include all who take the drug occasionally.

Extent of use of charas.

349. Charas is an expensive luxury, and its use in Bengal is very limited. The total consumption in the city of Calcutta and the district of Murshidabad is only 11 maunds. The Excise Commissioner reports that the average price of charas is Rs. 40 a sér, or double that of ganja. The dose seems to be about the same as that of ganja in each smoke. But the drug is used by people of better means. It is therefore in all probability taken more liberally, and excess is more common. The individual cost would therefore come to far more than double the cost of ganja. The daily allowance might be put at ¼ tola, costing 2 annas. The yearly consumption would thus be about one sér per head of the consumers, and the total import of 11 maunds 26 sérs would suffice for 466 persons. It may be noted that in Bengal charas is reputed to be weaker than ganja. It is possible that this may be true as the result of deterioration of the former in coming from the Punjab.

Sales to retail vendors.

350. The figures relating to ganja consumed in the province for the last 20 years, as shown by the sales to retail vendors in the various districts, show a large decrease from the first period of 5 years. The figures are as follows:—

Average.	Maunds.
1873-78	7,111
1878-83	5,297
1883-88	5,249
1888-93	5,133

The proportions of the various kinds of ganja have varied considerably during these periods, but, after having attempted to estimate the effect of these variations, the Commission find that the general result is the same as that above shown, *viz.*, that consumption has been stationary during the last 15 years, but that the average consumption has been much less than that of the previous 5 years. The increase of population, however, during this period must not be lost sight of. It amounted to about 7½ per cent. between 1881 and 1891, and, notwithstanding this, there was no increase in consumption during this period. In districts where the consumption has decreased, there are witnesses who say that the enhanced cost of ganja has reduced, and is reducing, the habit. Evidence is not wanting, however, to show that other causes also may have been at work to produce the result. The growing taste for liquor is one of the principal causes mentioned. This refers to the superior classes. One deposition alone (Patna District Board, 248) states that the low price of country liquor has caused a decrease in the sale of ganja among the inferior classes. This evidence, however, is contrary to the view held by the Excise Commissioner, who states in his memorandum (paragraph 65) that liquor, even in Bihar, is much dearer than ganja. Babu Hem Chunder Kerr attributes decrease to the disrepute in which the habit is held and the belief that its effects are baneful. An Utopian zamindar, a Muhammadan, attributes the decrease to the enlargement of the peoples' minds by education, the action of temperance associations, the publication of treatises and tracts which condemn the drugs, and the spread of civilization. In the statements of witnesses who endeavour to explain the increase alleged to have occurred in their own particular districts, the following reasons for such increase are given. In exact contradiction to the evidence that the growing taste for liquor is reducing the consumption of ganja among the better classes, it is now occasionally stated that the great cost of the liquor habit and its deleterious effects are making the same classes go back to ganja. Among the lower classes the raising of the price of liquor under the central distillery system is also said to be a direct encouragement to ganja. It is even stated that the example of the better classes is an encouragement to the lower, although the weight of evidence tends to show that the former are abandoning ganja. The better wages earned by the labouring classes, who are the principal consumers of ganja, is sometimes held to account for the increase. Bad seasons and consequent want of means have, it is said, brought the cheapest intoxicant into favour. As a special cause is mentioned the recent establishment of a new form of worship of Trinath in Eastern Bengal. The existence of the shops is said to be a direct incentive to consumption, but the statement of witness (202) that the officers of Government make strenuous efforts to push the sale, presumably for the sake of the revenue, was not sustained under oral examination. Some of the above reasons apply also to the increased consumption of bhang, which is far cheaper than ganja. And another very good reason is given in respect to this form of the drug, *viz.*, the influx of up-country workers into the mills and similar industries of Calcutta and its neighbourhood.

Reasons for local increase or decrease.

351. The above analysis of the evidence gives some of the reasons alleged by individual witnesses for local increase or decrease, and indicates the various causes which have assisted or interfered with the general tendency to decrease which is manifested in the provincial statistics as a whole.

352. The statistics furnished by the Kuch Behar State show an average retail sale of 76 maunds, which by the standard of the province should supply 6,000 consumers, or more than 1 per cent. of the population. The consumption seems to be stationary, though there is a gradual decrease of retail sale in the last three years.

Kuch Behar.

353. There are no means whatever of judging of the extent of use in these States.

Tributary States of Chota Nagpur and Orissa and Hill Tippera.

354. In the North-Western Provinces all three drugs—ganja, charas, and bhang—are very largely consumed. Bhang is used everywhere, and there is no evidence to show that the use is more common in one part of the province than another, if the Kumaon Division be excepted. It would appear that in the mountains the drug is only drunk or eaten in the form of majum by a few well-to-do people in the towns at the Holi festival. But the consumption is heavy in particular spots, such as Mathra, the home of the Chaubes, who appear to be the greatest and most notorious bhang drinkers in the whole of India, and Benares and other holy places on the Ganges. With regard to ganja and charas, the province may be divided into three parts. In the western portion, consisting of the divisions of Meerut, Rohilkhand, and Kumaon, ganja is hardly used at all. The statistics show no imports except at Shahjahanpur, which is on the extreme east of this section of the province. The drug in favour here is charas to the exclusion of ganja. In the eastern and southern portion, comprising the divisions of Benares, Gorakhpur, Allahabad, and great part of Fyzabad, ganja holds the field, though not to the exclusion of charas, except in the districts bordering on Bundelkhand. In the central portion of the province, comprising the Agra and Lucknow Divisions and part of the Allahabad and Fyzabad Divisions, both drugs seem to be freely consumed.

North-Western Provinces.

The use of the three forms of the drug in various parts.

355. In dealing with the trade of the province, the figure of imports of ganja given in the statistics was accepted in full view of Mr. Stoker's caution that it was not reliable, and his estimate that the import was between 4,000 and 4,500 maunds. For the present purpose the same figure, though in excess of Mr. Stoker's figure, may be taken; for it is necessary to include the local unexcised ganja, which no doubt comes into use in some quantity. In Bengal but small allowance was made for waste, and since figures of sale to retail vendors were supplied, only the waste which took place between the local gola and the *chillum* had to be considered. In dealing with the drug in the state in which it is imported, and with an import the greater part of which consists of an article which is less carefully prepared and far less valuable than Bengal ganja, a much higher allowance for waste must be made. Taking all things into consideration, it is doubtful if the consumption can be fairly fixed at more than 3,500 maunds. The North-Western Provinces give no figures of retail sale to aid this calculation. The total population of the province is 47,000,000, and one maund of ganja therefore suffices for some 13,000 persons. If the population of the divisions of Meerut, Rohilkhand, and Kumaon, where ganja is not used, be deducted (about 12,000,000), the maund of ganja suffices for only 10,000 persons. Judged by the Bengal standard, this is a high figure; but the cheapness and comparative weakness of the greater

Consumption compared with population of ganja.

part of the drug consumed in the North-Western Provinces may well induce a liberal use, and this result may approximate to the truth.

356. Mr. Stoker does not accept Babu Hem Chunder Kerr's estimate of average consumption per head at the high figure of 1½ sérs. At 6 annas a tola this means Rs. 45 a year, and this is obviously quite beyond the means of the consumers of average means. The individual consumption in Bengal has been estimated at half a sér, or Rs. 10 per annum. Mr. Stoker, dealing with a drug or mixed drug that costs less than *baluchar*, calculates the individual consumption at one sér, and the whole supply of 4,500 maunds as sufficient for 180,000 smokers. By the Bengal standard 3,500 maunds would supply 280,000 persons. It seems proper to make allowance for the cheapness of the drug and adopt the mean of the above calculations, or 230,000. This represents something less than ½ per cent. of the population. In the cities, *baluchar* sells at 6 annas a tola. It is cheaper in the villages probably because it is adulterated with *pathar*, which is anything from one-twelfth to one-sixth of the price of the other. If the average annual allowance of something less than one sér be regarded as being composed of ¼ *baluchar* and ¾ *pathar*, the cost comes to a reasonable figure.

Individual consumption of ganja.

357. With regard to charas, Mr. Stoker estimates the individual consumption at half a sér per annum. For Calcutta it was put as high as one sér, because it was regarded as a luxury of the comparatively wealthy. But it does not hold that position in the North-Western Provinces. The evidence shows that it is used by the poor more than by the rich. In many places it is actually cheaper than *baluchar* ganja, and being stronger less of it is used at a time. It is probable that Mr. Stoker's estimate approximates to the truth, and that the 1,150 maunds imported are consumed by about 92,000 persons. The use is most common in the Meerut, Rohilkhand, and Kumaon Divisions, and decreases towards the east of the province; but it is found in all districts, except those bordering on Bundelkhand, where the consumption is trifling. The consumers are at the above figure about one-fifth per cent. of the population, and this covers an addition for the small indigenous production of Kumaon.

Extent of use of charas.

358. Bhang is not used regularly like charas and ganja. There is reason to think that a large number of the better class of Hindus take it in extremely hot weather, and that it is a regular refreshment with a very large proportion of them in the summer. There are no statistics of consumption; the drug can often be had for almost nothing from the abundant wild growth, and is always very cheap. The price of bhang seems to range from 4 annas to as much as one rupee a sér in towns, *tatia* bhang from Farakhabad being more expensive than commoner kinds, while *baluchar* ganja is Rs. 20 to Rs. 30, charas Rs. 7½ to Rs. 25, Nepal ganja going as high as Rs. 35 and Rs. 40 a sér, and *pathar* ganja Rs. 2½ to Rs. 5.

Extent of use of bhang.

359. In the last twenty years, from 1873 to 1892, the hemp drug revenue of the North-Western Provinces and Oudh has grown from 4 to 7 lakhs. The increase in Oudh has been 193 per cent., and in the North-Western Provinces 50 per cent. It is from the figures of revenue, in the absence of statistics of retail sale, that deductions have to be made as to the rise or fall of the consumption of the drugs.

Increase and decrease.

360. Mr. Stoker connects these fluctuations in some important instances with changes in the administration of the liquor excise. He shows pretty conclusively that the hemp drug revenue has risen when the price of liquor has been raised, and that it has fallen when under the establishment of the outstill instead of the central distillery system liquor has been made more plentiful and more cheap. It is stated that the liquor revenue has in the same period grown from 17 to 32 lakhs, and that the enhanced revenue has been raised on a diminished issue of liquor. If there is this intimate relation between liquor and the hemp drugs, it seems to follow that the decreased consumption of liquor must have been accompanied by an increased consumption of the hemp drugs. And to this a reasonable addition must be made on account of an increase of 5 millions in the population in the twenty years' period. There is no reason to doubt that increase of consumption assignable to these two causes has actually occurred, for they are to all intents and purposes independent of any check or restriction arising out of the present system of hemp drug excise. The evidence shows that bhang has not got dearer; that the enhanced cost of *baluchar*, due to the Bengal duty, has been counteracted by the supply of a cheaper article; and that charas has actually been falling in price, thanks to improved communications.

Connection between the use of liquor and hemp drugs.

361. Besides indicating the relationship between the liquor and the hemp drug habits, the figures of revenue, great though the expansion has been, do not go far to assist in ascertaining whether the consumption of the hemp drugs has grown or not. There is the probability that the demand has increased, bringing greater profits and consequently more keen competition amongst the purchasers of the farms. But Mr. Stoker's remarks lead to the belief that the enhancement of the revenue has been due partly to improved management, resulting in the checking of clandestine practices, or, as he describes it, the stopping of "leakage." To judge by the instances given, losses of this sort were very considerable; and this reform, together with the prevention of smuggling and illicit traffic, would go far to account for the increase.

Increase of revenue due to improved administration.

362. Turning to the evidence, there is little definite testimony of increased consumption, in which it is clear that the opinion is based on actual observation. There are not in this province as there are in Bengal definite statistics on which to form an opinion as to increase or decrease. The preponderance of testimony is in favour of increasing consumption, and the high price of liquor is more frequently alleged as the cause than anything else. Witness (20) makes a very definite statement on this point. Allied to the reason connected with liquor is found the closing of chandu and madak shops mentioned by some witnesses. Other causes given are the accessibility and cheapness of the drugs, the weakening of social and religious restraints, facilities for travelling leading to the circulation of bad habits, general demoralization, and the increase of poverty and the number of sadhus and mendicants. It is stated by some witnesses that under Moghal rule the drugs were prohibited and their consumption suppressed by penalties such as whipping and mutilation, and that the present liberty has degenerated into license. On the other hand, the perversity which drives people to do what is restricted or prohibited is alleged by another as the cause of increase. Another attributes increase to experience of the beneficial effects of use of the drugs. It appears that there is an

Direct testimony as to increase.

organized movement among the Kayasths which forbids the drinking of liquor, and that these people are taking to bhang instead. Some witnesses allege that irrigation in rendering the country damp and cold makes the drugs a necessity, and one that the use of charas is increasing because the drug "is generally prepared and sold (as retail dealing) by the fair sex in large towns." This last matter was taken up by the Commission, and will be noticed further on.

Direct evidence of decrease.

363. But the evidence is not all on the side of increase. Some witnesses think that the consumption is stationary, and some that it is decreasing. The principal cause of decrease alleged is the change of habit among the higher classes and the better-to-do of the lower in the direction of liquor. The high cost of the drugs has, according to one or two witnesses, caused people to abandon them.

Competition between ganja and charas.

364. There is some evidence that ganja is being supplanted by charas in public favour. Mr. Wall, late Commissioner of Excise, wrote as far back as 1881: "From the large proportion which charas bears to other drugs in large cities like Allahabad and Benares, and from the increase in license fees for sale of charas which is noticed by the Bengal Government, it is highly probable that charas is coming into favour. It is, in fact, said that within the last few years, owing to increased duty levied on *baluchar* ganja in Lower Bengal, the consumption of charas has largely increased everywhere." Charas is now even cheaper as compared with Bengal ganja than it was then, and there is some evidence that the change is still going on.

Rampur.

Extent of use of the drugs.

365. The Revenue Member of the Rampur Council of Regency (35) states that people smoke ganja and charas everywhere in the North-Western Provinces and in the State of Rampur. Rampur, however, is situated in the Rohilkhand Division, where charas appears to be used almost exclusively. It is probable, therefore, that the statement about the use of ganja in Rampur is rather too general. This witness also alleges that the use of all three drugs is increasing because they are cheap, and they are not forbidden by the Hindu religion.

Tehri Garhwal.

Extent of use of the drugs.

366. The use of the drugs in Tehri Garhwal is probably as prevalent as it is in Kumaon and British Garhwal. There is no special information for the State, but from the evidence of witness (49) it may be assumed that charas is the only form of the drug used; that its use is not extensive, but possibly spreading through "a growing tendency to take narcotics of all kinds."

Punjab.

Extent of use.

Charas and bhang are used, not ganja.

367. In the Punjab the use of ganja disappears, the indications of its existence being found only in the statements of occasional witnesses. It has no place in the excise arrangements. Charas and bhang are used to a greater or less extent in all parts of the province. Regarding bhang, the Excise Commissioner admits that a certain quantity is consumed without passing through the hands of the licensed vendors, but he does not think that it is very great, because the people of the parts in which the plant grows wild are not addicted to its use, while the retail price (three or four annas a sér) is so small that it is not worth while for a consumer to attempt to obtain a supply elsewhere than from the nearest licensed shop. There is, however, reason to

believe that in the south-west corner of the province, where the use of bhang is most prevalent and cultivation is carried on to the extent of about 100 acres, a considerable share of the locally grown drug escapes excise. Regarding charas also, it is probable that the figures of retail sale do not represent the full consumption. These considerations do not, however, affect the view of comparative consumption of the two drugs over the province which the Excise Commissioner has presented in his memorandum, except possibly that the consumption of bhang in the south-east corner may be larger than is represented.

Extent of use of charas.

368. Taking charas first, it will be seen that its use is most prevalent in the Ludhiana district, and to a somewhat less degree in the Himalayan districts, and in and about the cities of Delhi, Umballa, Amritsar, Lahore, and Peshawar, and that generally the eastern half of the province has decidedly more inclination to the drug than the western half. The measure by which the two halves of the province are differentiated is a consumption of 5 ounces by 100 of population. This measure might be raised to 6 ounces on account of defective registration of sale, and expressed in the terms used for Bengal in this report as one maund to 21,500 of the population. The rate of consumption in Ludhiana is double of this, or one maund in 10,000, and in the greater part of the western half of the province is hardly more than one maund to 60,000.

Individual consumption of charas.

369. In the North-Western Provinces Mr. Stoker estimated the individual consumption of charas at half a sér per annum. In the Punjab a somewhat higher rate might be adopted because the drug is cheaper, the price to consumers ranging from Rs. 4 to Rs. 15 per sér in this province, while in the North-Western Provinces it was Rs. 7½ to Rs. 25. If the number of consumers be taken at 60 instead of 80 to the maund, the total number for a total consumption of 1,200 maunds will be 72,000.

The divisions of Delhi, Jullundur, and Lahore consume five times as much as Rawalpindi, Peshawar, and the Derajat, and there must therefore be 60,000 consumers in the former to 12,000 in the latter. In this comparison also the province falls into the same halves as before, for the consumption of the districts of Montgomery, Multan, and Jhang in the Lahore Division barely reaches 20 maunds, and does not therefore materially affect the figures.

Extent of use of bhang.

370. The total retail sale of bhang on the average of the last five years is 3,800 maunds. This probably falls considerably short of the actual consumption owing to the existence of the wild growth in many districts, the regular cultivation which is carried on in the south-western districts, and the homestead cultivation which seems to prevail all over the province to a limited extent. A very appreciable supply must be got direct from these three sources without the intervention of the licensed vendors. Maunds 4,200 would represent a supply of one maund to every 5,000 of the population. The Excise Commissioner finds that the south-eastern districts have the heaviest consumption, 100 to 145 oz. to 100 of the population, or about one maund to 1,000 persons; the central districts come next with about one maund to 4,000 of the population, and the rest of the province consumes one maund to about 8,000, except that the districts of Delhi and Ludhiana almost come up to the districts of heaviest consumption.

371. Bhang is so cheap, 3 or 4 annas a sér, as to give very wide latitude for individual indulgence. On the other hand, a great share of the consumers, perhaps the majority, are above the class of the very poor, and the drug is to a great extent used with ingredients which are more or less expensive. Occasional use, either regulated by the season, or prompted by the weather, or connected with social and religious observances, is also very common. These things make it extremely difficult to state any estimate of the number of consumers, though a figure of total consumption has been arrived at. It is very doubtful if more than about half of the total consumption, or 2,000 maunds, is taken by regular and habitual consumers. For such persons, at the price given above, two tolas a day, or ten sérs in the year, would not be an extravagant allowance. The cost of this would be less than three rupees a year, and the ingredients would bring the expenditure up to about Rs. 10. The number of habitual consumers would thus be about 8,000. This estimate of individual consumption accords with the evidence on the particular point. The occasional consumers are many times more numerous. The description which is to follow of the "classes of consumers" and of the "social and religious customs" connected with the use of the drugs will throw more light on the extent of the occasional use of bhang. The use as a summer drink seems to be much more common in the northern parts of India, which are characterized by intense dry heat, than in the southern. The dividing line might be drawn with fair accuracy from the Runn of Cutch to Darjeeling.

Estimate of number of bhang consumers.

372. The statistical table in the form prescribed by the Commission gives retail sales from the year 1875-76 to 1892-93. But in the first five of these years it is obvious that the figures include transactions other than retail sale in column 45. From 1881-82 onwards there is a steady increase in the figure for charas, interrupted only by a fall in the year 1890-91, which, however, was more than made up by the rise of the following year. In the year 1892-93 the figure is 6 maunds less than in 1891-92. As regards bhang, the figures of the whole period 1880-81 to 1892-93 do not offer any definite suggestion of increase or decrease. Their regularity might, however, tend to remove the hesitation which the Commission feel in accepting the figures for charas as a reliable index of consumption if it were not that bhang is so cheap that there can be little temptation either to smuggling outside the shops or the keeping of incorrect accounts within them. The sale of other preparations of hemp shows a steady decrease. These preparations must include majum and other sweetmeats into which hemp enters. They are not very important, and it is not therefore worth while to speculate whether the decrease of sale means a real decrease of consumption or not. It would be necessary to proceed on mere conjecture, for the evidence and Government papers throw no light on the subject.

Increase and decrease.

The evidence of the statistics.

373. Regarding rise or fall in the consumption of bhang also, there is little to be said. Mr. Drummond states that the use of this form of the drug is increasing in the south-eastern districts, and that caste movements against alcohol, enhanced cost of spirits, and growing prosperity among the Jats may account for it. But there is little other evidence to indicate increase, and the statistics of the Delhi Division do not suggest it. On the contrary, there is evidence that the better

Bhang.

classes are giving up bhang for liquor—a change of habit which has been noticed in other provinces.

374. The steady and considerable increase which the statistics of the consumption of charas shew in the last ten years is not reflected in the evidence in a very decided manner.

Evidence regarding charas.

It is true there are some who allege increase as being caused by the development of the Central Asian trade, the fall in the price of charas, the increase in the number of shops, the increase of population, and the addition to the number of poor and idle people. But there are many who allege decrease; and the more weighty opinions are all in favour of the view that the use is neither increasing nor decreasing. It is true that during the last three years there has been a great development of the trade in charas, but the excess imports have for the most part passed over the Punjab into other provinces and territories, and only a portion of the increase appears from the figures to have stayed in the province. The figures in column 45 of the statement do not appear to be derived from accounts of actual retail sale. They are the exact difference of columns 12 and 16, and the explanatory note attached to the table shows that they are got by subtracting the exports from the imports. In saying that "it is one of the incidental advantages which we expect to derive from the proposed new arrangements that we shall be able to register the import trade efficiently and acquire a proper control over it," the Excise Commissioner appears to admit that the record of imports into the province is not reliable even yet. He considers the statistics of consumption fairly accurate. They were derived in 1892-93 from a comparison of the imports and exports in each district in order, as he says, to give reliable figures of the quantity retained in each district for consumption. But whatever method was employed in 1892-93 seems to have been also employed in previous years, for the figures in column 45 are throughout merely the difference between columns 12 and 16. The Commission therefore have considerable doubt as to the correctness of the figures as indicating a steady increase to consumption for the last 13 years from 480 maunds to 1,020 maunds. This apparent increase may be due to improved methods of registration.

375. The Native States of the Punjab all lie, with the exception of Bahawalpur, in the eastern of the two halves into which the province is divided in reference to its habit of consuming charas. Leaving Bahawalpur out of consideration for the present, there is no reason to suppose that the States, either those which are wholly or partly in the Himalayas, or those which are in the plain, differ in any material respect from the British territory with which they are intermingled in regard to this habit. It hardly seems necessary to make any exception of the State of Nabha, where the hemp drugs are said to be prohibited. A continuous area of heavy consumption of charas is thus determined, comprising all those parts of the Punjab and North-Western Provinces lying between Lahore and Shahjahanpur. As regards bhang also, the description of the habit in the province must be held to apply to these States.

Punjabs States.
Extent of use.

There is no official report from Bahawalpur, but the information which has been collected confirms the idea which is suggested by the position of the State, with reference to the Punjab and Sind, that it is a bhang-consuming country. Ganja is hardly used at all, and charas but little. The use of bhang is more common in the western than the eastern half of the State.

Central Provinces.

The statistics of 1892-93 relied upon.

376. The figures of consumption of ganja given in paragraph 52 of the Excise Memorandum show since 1887-88 increase in every district except Hoshangabad and Narsinghpur. The decrease in these two districts is small; the increase in several districts is large. There may have been some increase in the habit in this period—a point which will be discussed later on; but the reports and evidence leave no doubt that the bulk of the increase in registered sale is due to improved administration and success in suppressing the use of the unexcised drug. This being the case, the figures of the last year, 1892-93, furnish a better basis for a survey of the consumption throughout the province than do the figures of any other year or of an average of years.

The following table contains the material statistics of 1892-93 :—

Divisions.	Districts.	Population.	Maunds of ganja sold.	Number of persons per maund, approximate.	Number of consumers at rate of 64 tolas per head per annum.	Percentage of consumers to population.
Nagpur.	Nagpur	758,000	73	10,000	3,650	·5
	Bhandara	743,000	62	12,000	3,100	·4
	Chanda	698,000	23	30,000	1,150	·2
	Wardha	401,000	28	14,000	1,400	·3
	Balaghat	383,000	118	3,000	5,900	1·5
	Total ...	2,983,000	304	10,000	15,200	·5
Jubbulpore.	Jubbulpore ...	748,000	128	6,000	6,400	·9
	Saugor	592,000	33	18,000	1,650	·3
	Damoh	326,000	34	10,000	1,700	·5
	Seoni	371,000	79	5,000	3,950	1·1
	Mandla	339,000	52	7,000	2,600	·8
	Total ...	2,376,000	326	7,000	16,300	·7
Narbada.	Hoshangabad ...	530,000	60	9,000	3,000	·6
	Betul	323,000	23	14,000	1,150	·4
	Chhindwara ...	339,000	35	10,000	1,750	·5
	Narsinghpur ...	367,000	35	10,000	1,750	·5
	Nimar	253,000	19	13,000	950	·4
	Total ...	1,812,000	172	11,000	8,600	·5
Chhattisgarh.	Raipur	1,256,000	189	7,000	9,450	·8
	Bilaspur	778,000	108	7,000	5,400	·7
	Sambalpur ...	796,000	95	8,000	4,750	·6
	Total ...	2,830,000	392	7,000	19,600	·7
	GRAND TOTAL ...	10,001,000	1,194	8,000	59,700	·6

377. It will be seen from these figures that the area of heaviest consumption is the group of four districts, Balaghat, Seoni, Jubbulpore, and Mandla; and among these Balaghat uses the drug at double the rate of the other three. Next in order come the districts of the Chhattisgarh Division. After these the other districts along the northern frontier, Damoh, Saugor, Narsinghpur, and Hoshangabad, with the addition of Chhindwara. Then follow the districts on the western and southern frontiers, Nimar, Betul, and Wardha, with Nagpur and Bhandara. And far behind comes the district of Chanda. The first two of the above groups consume the drug at a higher ratte han one maund to 10,000 of the population ; the last three at less. Saugoris is included in the second group in spite of its apparently light consumption, because the large difference between it and the neighbouring district of Damoh in this respect confirms the evidence of illicit import given by reports and witnesses. Nagpur is placed in the fourth group in spite of its heavy sale compared with the other districts of the same group, because the consumption is to some degree foreign to the district, being connected with the troops at Kampti and other people who are attracted to the capital of the province. The high rate of consumption in Chhindwara, Seoni, Balaghat, and Mandla may probably be associated with their physical characteristics and their very malarious climate, for they cover the central highlands of the province—a tract of mountains and dense forest.

The use of ganja compared by districts.

378. The evidence fixes the daily ration of ganja at about one-fourth of a tola. Making allowance for the custom of smoking in company, a lower rate ought probably to be adopted. And, on the other hand, the comparative cheapness and inferiority of the drug suggests a higher allowance than was thought appropriate for the Bengal calculations. The allowance of 64 tolas in the year, costing Rs. 5 to 8, or 50 consumers to the maund, appears to be a just medium. At this rate the number of consumers in the province would be about 60,000. A considerable share of the excise ganja is used as bhang under the name of *desi* bhang. It seems to consist of the leaves and bracts, and often perhaps of the flowers themselves, picked off the ganja stalks. A reduction has to be made on this account if the number of smokers only is to be ascertained. On the other hand, some addition has to be made for the use of smuggled ganja. It will perhaps be sufficient to regard 60,000 as the number of smokers of ganja, for the estimate does not pretend to exactness. This gives a percentage of ·6 on the population of 10,000,000.

Estimate of individual consumption of ganja.

379. The evidence on the point of increase or decrease of use is very contradictory. In full view of many of the witnesses is the fact of the great and steady increase of the revenue and registered consumption in seven or eight districts, and their opinion as to the growth or decline of the use are doubtless affected by it. It has been stated above that the Commission attribute this increase for the most part to improved administration. Many witnesses hold this view, and none controvert it. But there are some who think that the extended use of the drug has materially contributed to the enhanced revenue. The Judicial Commissioner, Mr. Neill, has discussed the matter rather fully. He believes that the use has increased because (1) he is so informed by natives of sound and sober judgment; (2) the consumption and revenue have been steadily growing up to date, whereas "if

Increase of use of ganja.

it was only that taxed ganja was substituted for untaxed and illicitly obtained ganja, the great increase would have shown itself in the earlier years after cultivation of the ganja-bearing plant was placed under restriction, imports watched, and all illicit cultivation severely punished;" (3) the increase has occurred notwithstanding that the price of ganja has been raised to five times what it was in 1875-76; (4) as high a still-head duty as possible has been placed on liquor, and ganja is comparatively a cheap and convenient, because portable, stimulant; and (5) the excise arrangements have advertised the drug and made it popular, and supplied a superior quality of it. These arguments include nearly all that have been urged by other witnesses, except the one that with those who seek a stimulant, the hemp drugs have the advantage over liquor that they are not prohibited by the Hindu religion. But after all Mr. Neill, like the vast majority of the witnesses all over India, appears not to speak from personal observation of the use. The evidence of Colonel Doveton, Conservator of Forests, is important as bearing upon the use of ganja among the jungle tribes. He describes this as more common than formerly. It is to be regretted that more information has not been furnished to explain the extraordinary high consumption in the Balaghat district, which must have a large population of the jungle tribes, and, it may be added, the great increase of the sale in the last five years. The construction of the Bengal-Nagpur Railway must have had considerable effect in the consumption of the districts through which it passes east of Balaghat. Special enquiries are being made by the Central Provinces Government regarding the increased consumption in the districts where it is most marked.

Increase on the balance of evidence.

380. There are not wanting witnesses to assert that the use is on the decrease, and many believe that there is neither increase nor decrease. The statistics show that in ten districts there is either decrease or no very remarkable increase in the retail sale in the last five years. But the Commission, looking to the balance of evidence supported by the statistics, cannot resist the conclusion that increased use accounts in some measure for the general growth of the revenue and registered consumption. They note that in more than one place the increase of revenue is attributed in part to the supply of a superior quality of drug. That the Khandwa drug is superior may be the case, but there is evidence that the local produce is preferred in the extreme east of the province, and it is in these regions that the greatest increase has occurred.

Feudatory States.

Extent of use.

381. The supply of Khandwa ganja to the Feudatory States and zamindaris has steadily increased during the last ten years from 80 maunds to 273 (paragraph 66 of Excise Memorandum). The final figure represents a consumption by 13,650 smokers by the standard used for the calculations of the province. There is no evidence to show that the use has increased or decreased. The zamindars and feudatories had an ample supply of ganja of local growth before the Excise Department undertook to supply them, and it is possible that the old sources of supply of local growth are not yet quite closed, though the evidence shows the contrary.

Madras.

382. In the Madras Presidency the only form of the drug which need be considered for the present purpose is ganja. Charas is only very exceptionally used, and there is no record of the amount imported. Bhang is not a distinct article from ganja. The liquid

preparations, as well as the sweetmeats and electuaries, are made from ganja. Preparations of the latter class occupy a much more prominent place in the evidence of witnesses than they do in other parts of India, and this would suggest that they are in more common use.

The statistics of retail sale do not show the full consumption of ganja.

383. The statistics furnished by the Madras Government give 67,000 sérs as the retail sale of ganja for 1892-93. It has been ascertained that these are sérs of 80 tolas, and the registered consumption is therefore 1,675 Indian maunds. In a previous chapter it was estimated that the share of the Madras produce which stayed at home was 3,500 maunds. A considerable reduction has to be made from this on account of waste to arrive at the amount which actually goes into consumption. The general tenor of the Madras evidence must also be noted. The same general unfamiliarity on the part of the witnesses with the facts relating to consumption which has been found more or less all over India exists in Madras also, and perhaps to a greater degree. The returns of retail sales obtained from the shops cannot represent more than a portion of the consumption of the Presidency, for there is ample evidence to show that the drug is freely handed about, and it has been admitted in official reports that the consumption is much larger than was supposed.

Use of ganja in different parts of the Presidency.

384. The figures of retail sale place the districts in the following order as regards their rate of consumption: Madras, Kistna, Trichinopoly, Bellary, North Arcot, Tanjore, Malabar, Vizagapatam, Godavari, South Arcot, Madura, Salem, Cuddapah, South Canara, Coimbatore, Nellore, Tinnevelly, Chingleput, Ganjam, Anantapur, and Kurnool (Nilgiris no figures furnished). The evidence leaves the impression that the use is most common in the Northern Circars and gradually diminishes to the south until the Nilgiris are reached, where, according to some witnesses, the percentage of consumers on the population is high. The statistics and the evidence, therefore, do not agree; for, according to the former, Ganjam takes a very low place, while some southern districts are high on the list. It appears, however, from the evidence that the people of the northern hill tracts prefer opium, and consume little of the hemp drugs. The latter are used principally in Vizianagram and the seaport towns. The non-consuming population of the hill tracts would materially affect the rate of consumption as deduced from the figures. Kistna may owe its high position to other than strictly retail sales, as it is a district of production, and the same may be the case with North Arcot. Trichinopoly and Bellary have troops and probably heavy consumption in the cities to account for their retail sales being high. The position of Malabar is justified by the evidence as to the use in that part of the Presidency. The consumption of the City of Madras is probably indicated with fair accuracy by the figure of retail sale. It is lower than that of Bombay, which again is lower than that of Calcutta, the figures being—

Calcutta, one maund to	1,400
Bombay " "	2,300
Madras " "	4,900

The number of consumers of ganja.

385. Looking to the cheapness and comparative inferiority of Madras ganja, the average yearly allowance of the habitual consumer cannot be put at less than one full sér of 80 tolas, and the total number of regular consumers in the Presidency

would then come to about 72,000, or ·2 per cent. of the population. Attention has already been drawn to the apparent prevalence of the use of sweetmeats and other refined preparations concocted with ganja. The occasional use of these forms of the drug must extend to a very large share of the population over and above the number of regular consumers. There are also a certain number of drinkers of the liquid preparations.

Increase and decrease of use of ganja.

386. The preponderance of evidence is decidedly in favour of the view that the use of the hemp drugs is increasing. The causes assigned for increase are generally the same as those mentioned in other provinces, the high price of liquor taking a prominent place among them. The Collectors, however, are generally of opinion that the use is stationary or decreasing. When decrease is alleged, it is in most cases attributed to the restrictions brought about by the excise arrangements, the raising of the price of the drug, and the limitation of the number of places where it can be bought. The statements of witnesses Nos. 131 and 155 may be consulted on this point. It has also been pointed out that stray cultivation is being discouraged, though it has not been formally prohibited. Thus there are causes operating to modify the extent of use in both directions, and the Commission do not think that the evidence enables them to say which are the more potent, or to judge in any way what the actual consumption is.

Madras States.

387. The Travancore import has been estimated at 100 maunds, which would be sufficient for 4,000 consumers. The use appears to be more prevalent in the hilly and malarious tracts. Some alleged increase is attributed to the relaxation of religious sentiment in regard to the use of intoxicants and communication with foreigners. The information regarding the other States furnishes no facts of special interest.

Bombay.

388. Ganja is used in all parts of the Bombay Presidency, a large share of the consumption of it being in the form of sweetmeats and drink. Bhang is used in the Bombay City and the Northern Division. Charas is smoked in the City of Bombay only, and that in very small quantity.

Use in different parts of the Presidency of ganja.

389. The figures of retail sale of ganja are wanting in some districts and irregular in others, so that it may be doubted if they can lay claim to accuracy even in the districts where they appear to be complete. Such as they are, they make the various districts take approximately the following order as regards their consumption of ganja: Dharwar, Bombay, Kanara, Bijapur, Nasik, Satara, Poona, Ahmedabad, Surat, Ahmednagar, Belgaum, Broach, Sholapur, Khandesh, Panch Mahals, Kaira, and Ratnagiri.

Total consumption of ganja.

390. There are no figures for Thana and Kolaba. The total of the district figures of retail sale taken out as far as practicable by five years' averages, with an allowance made for Thana and Kolaba, comes to about 3,800 maunds. The total consumption has been estimated in a previous chapter at maunds 3,000, and it was thought that this was a liberal calculation. Before expressing any opinion from these figures as to the incidence of consumption on the population, it will be as well to examine the evidence as to individual consumption.

Individual allowance of ganja.

391. Mr. Almon, Assistant Collector of Abkari in Bombay, maintains that the moderate consumer of ganja spends two annas a day on his indulgence, and consumes one tola of the drug. This represents an annual consumption of over four sérs and an expenditure of Rs. 45, and only admits of ten consumers being supplied by each maund of the drug. The average sale of 258 maunds, with allowance for waste, only suffices therefore for 2,000 or 2,500 consumers. Some witnesses, but they are few, state that the daily allowance of a moderate consumer is above one tola. The majority of witnesses put it at less. The lowest limit is reached by the Collector of Ratnagiri, who gives one-sixteenth of a tola as the average daily allowance, and reports 8,000 consumers in the district, of which the average retail sales amount to 74 maunds—*i.e.*, more than 100 consumers per maund. The Collector of Ahmednagar has arrived at a mean of the above extremes. He caused "a hasty census to be taken throughout the district," with the result that the number of consumers in a population of 888,755 was found to be 6,134, or ·69 per cent. The Ratnagiri inquiries gave a percentage not very much higher than the above, but by means of a much lower individual allowance. In Ahmednagar the allowance of 6,134 consumers on a total retail sale of 154 maunds comes to about 40 consumers to the maund, or one sér per head per annum, or somewhat less than a quarter of a tola per diem. The weight of evidence would fix the daily allowance nearer to one-half than one-quarter tola. Mr. Ebden's enumeration probably therefore included occasional consumers, and possibly counted the same people more than once. The price of ganja outside Bombay ranges from three annas a pound in Satara to one anna a tola in Khandesh. One sér of ganja can never therefore cost more than Rs. 5, and the average price will be within the reach of all classes of consumers.

Number of regular consumers estimated.

392. Making allowance for a considerable share of the drug being used in the making of drinks, sweetmeats, and other preparations, which are for the most part consumed only occasionally, and for waste, the number of regular consumers in British territory alone cannot be less than 2,500 × 30, or 75,000, giving a percentage on the population of ·46. Besides these, there are the small body of regular drinkers of the hemp drugs and the occasional consumers of other preparations of the drug whose numbers cannot be estimated. The number of regular consumers in the Bombay City can hardly be less than 6,000.

Figures of retail sale not generally reliable as index of consumption.

393. Little reliance can be placed on the figures of retail sale, and in the present discussion they have only been utilised to range the districts in the order of their relative rate of consumption, and relied upon in the case of Ahmednagar because they were in fair accordance with the Collector's census of consumers and the experience gained in other provinces. The figures of retail sale in the Dharwar district are extraordinary. They show steady increase for years past, and have now reached a point which by the reasonable standard of individual consumption above adopted gives a percentage of over four of regular consumers on the population. This is impossible; there is no such consumption as this in any rural tract in the whole of India. The witnesses who speak with special knowledge of the district do not give anything like this percentage, and they do not confirm the evidence of the figures that there has been a remarkable increase of consumption in the last fourteen years. The

Collector of Dharwar has endeavoured to ascertain the causes of this increase, and whether it is connected with the decline in the consumption of liquor and toddy. He reports that he can trace no connection between the two phenomena; that there has been a large increase in the consumption of ganja, which is to be attributed to the introduction of the railway bringing with it scores of ganja smokers and eaters; that there is no reason to suppose that the people of the district have generally taken to the use of the drug, though a number of individuals may have contracted the habit from foreigners; and that there is no export of the drug. He attaches a statement showing that the retail sales of 1892-93 amounted to 1,345 maunds, an increase of more than 200 maunds over the figures of 1891-92. It is impossible to suppose that this huge amount can have been consumed in the district. It is larger than the whole consumption of the Central Provinces with its Feudatory States and zamindaris. The only reasonable explanation is that the greater part of it leaves the district, and enters the surrounding foreign territory, Hyderabad, Mysore, and Goa. The Kanara district also may possibly get its supply from the Dharwar shops. The Dharwari ganja is not unknown, as the Commission found, in Mysore. This exaggeration in the Dharwar figures furnishes one more reason for distrusting those of other districts as an index of the local consumption.

Increase and decrease of consumption.

394. On the point of general increase or decrease in the use of ganja, the responsible official witnesses, excepting the Collector of Bijapur, take the view that there is no perceptible change. On the other hand, there are witnesses of other classes who observe increase, and attribute it to the same economic and social causes as have been noticed in other provinces. But it may be noted that the high price of liquor does not take a prominent place among them, and many statements will be found to the effect that the hemp drugs are giving way to liquor. It cannot be said that there is a preponderance of the evidence either way or that there is any satisfactory basis for forming an opinion. The only causes of increase which can be assumed to have operated in the direction of increase are the increase of population and development of railways. The social causes would seem to tell both ways, education, however, being rather favourable to decrease of the habit than the reverse. The fact that the lower orders are addicted to liquor in the Bombay Presidency, and that their earnings are comparatively high and enable them to indulge this predilection, is a factor operating against increase of the hemp habit. Regarding bhang and charas, the tendency of the evidence is to show that the former is giving way to liquor; the use of the latter, practically confined to the City of Bombay and insignificant in extent, shows no sign of increase.

Bombay States.

395. The extent of use described in the Presidency may be accepted as applicable to the Native States under the supervision of the Bombay Government. There are no materials to enable a more exact estimate to be formed. In the Deccan and Southern Maratha Country ganja must be the favourite form of the drug, and in the Gujarat States, Kathiawar, and Cutch it is to a great extent superseded by bhang.

Aden.

396. The statistics show that about 40 maunds of ganja and 4 of bhang are consumed in Aden, of which the population is 42,734. This gives the high rate of ganja consumption of one maund to 1,000 of the population. The maximum price at which the contractor

is allowed to sell is one anna a tola, and there is no minimum. The average price is probably much the same as that of the shops in the Presidency proper. If the Bombay rate of 30 consumers to the maund be taken, the consumers are about 3 per cent. of the population, or one man out of every 8 or 10. Considering the character of the population, composed to a great extent of Indian sepoys and the followers of native regiments, the high figure is not surprising. There is reason to think that service abroad induces a more liberal consumption of the hemp drugs among native regiments and their followers.

397. The average production of bhang in Sind and Khairpur is about 4,000 maunds. The statistics give the average retail sale of the British districts as 4,539 maunds, and this does not include the consumption of Karachi, for which district no figures of retail sale are given. The population and circumstances of Karachi compared with both those of Hyderabad justify the assumption that at least 500 maunds are consumed in the former. The figure of total consumption of the province must be raised by this amount, and by 1,000 according to the statistics for the State of Khairpur. But looking to the population of Khairpur, this consumption appears excessive, and the retail sale probably includes locally produced drug sold for consumption in other districts of Sind. So also it is probable that the retail sale of the Shikarpur district, where there is a considerable area of cultivation, includes the drug which has been exported. This district has not as high a figure of population as Hyderabad, and yet is credited with double the consumption. Hyderabad has but a trifling area of cultivation, and its figures of retail sale are probably a fairly accurate index of the consumption. They give one maund to 820 of the population, or say 800, allowing a few maunds for defective registration. This rate applied to the whole population of Sind with Khairpur, about 3,000,000, gives a total consumption of 3,750 maunds, which approximates to the estimate of production based on the area of cultivation. The statistics on a six years' average show that about 650 maunds of bhang are imported, mostly into the Shikarpur district. The estimated consumption, 3,750 maunds, therefore, only falls short of the total supply, 4,650 maunds, by 900 maunds, which is not an extravagant allowance for waste.

Sind and Khairpur.

Total consumption estimated of bhang.

398. The average price of bhang is about Re. 1 a sér, and the average daily allowance 1 tola or about 4 sérs per annum. A maund therefore supplies about 20 regular moderate consumers. But the majority of the consumers take the drug only occasionally. The use in Sind—certainly in Upper Sind—is very like that of the Punjab and Northern India, where the beverage is drunk largely in the hot season, and to a comparatively small extent in the cold. It is probable that not more than one-third of the consumption can be credited to regular consumers, and that class would by this calculation number $1,250 \times 20 = 25,000$. The occasional consumers are very many times more numerous, and may not improbably amount to between 5 and 10 per cent. of the whole population. From this estimate the Thar and Parkar district is excluded, where the use of the drug is much less common than in the other districts of the province, its place being taken by opium.

Individual allowance.

Number of regular consumers of bhang.

399. The retail sale of charas, making an allowance of 5 maunds for Karachi, where there are no figures, is about 43 maunds. The import, however, averages 70 maunds. The consumption may be taken to be 50 maunds. The average daily allowance appears

Number of consumers of charas.

to be about ½ tola, or ⅛ sér per annum. There would then be about 2,000 charas smokers in the province, and these are all regular consumers. The cost at the above rate is Rs. 12½ per annum, which is reasonable. The district of Shikarpur would seem to contain nearly half of the charas smokers.

Number of consumers of ganja.

400. The consumption of ganja is about the same as that of charas. The former is, however, the cheaper drug; the individual consumption is probably therefore larger, and the smokers less numerous. The use is most prevalent in Karachi and Hyderabad, and may be said not to exist in Shikārpur and the Upper Sind Frontier. Thar and Parkar consumes more ganja than charas, hardly any of the latter.

Increase of consumption.

401. The statistics do not furnish any reliable index of the growth or decline the use of either of the drugs. The evidence indicates increase, except in the case of ganja, but not very decidedly. The Commissioner (Mr. James) bears testimony by personal observation to the increase of the different classes of ascetics who principally are addicted to the drugs. Their number by the census of 1891 was 18,594. He is also of opinion that the use has spread among the labouring classes, whose wages have greatly risen in recent years. The addition to the population during the last 20 years, which amounts to over 30 per cent, must in the natural course of things have caused an increase of the total consumption.

Berar.

402. The memorandum of the Hyderabad Assigned Districts throws doubt on the figures of retail sale of ganja contained in column 44 of the statistical table. They show an average comsumption in the last five years of some 800 maunds. They are fairly regular, and, but for the discredit thrown on them by the memorandum, seem fit to be accepted as an index of consumption. It is true that the local production and import together amount to 1,300 maunds. But the drug in this form contains a great deal of useless material, and it is probable that when sold retail 1,300 maunds get reduced to 800. This is not so large a proportion of waste as was found in the Central Provinces. The imported drug seems to come from Khandwa, and it is not likely that the local ganja is a more finished product than that imported. If the consumption of Berar is to be compared with that of the neighbouring Central Provinces, where the figures of retail sale represented the consumption of the cleaned drug, it certainly cannot be taken to be more than 800 maunds; and probably this is a high figure. In Berar the price of the drug is one-fourth of what it is in the Central Provinces. It is probable, therefore, that the individual allowance is very much higher. The evidence puts it at ½ tola a day, or approximately 2 sérs per annum, which would cost Rs. 5. There would thus be 20 consumers to the maund and 16,000 in the province, giving a percentage of ·55 on the total population. The result is not far different from that arrived at in the Central Provinces. As regards the result and individual cost, it appears to be reasonable. The evidence regarding increase and decrease of use is of the usual contradictory character. The statistics throw no light on the point, for they are not correct as regards the retail sales, and, as regards the imports, are not in a suitable form for the purpose. The preponderance of evidence is in favour of increase, but the direct observation of a witness like (31), who says that the younger men rarely smoke, must go for something. If the evidence of the majority be accepted, it is nevertheless certain that the increase is not very marked.

Ajmere-Merwara.

403. The reports and evidence from Ajmere-Merwara furnish no statistics to enable an estimate to be made of the extent of use of the hemp drugs. There was an increase of revenue in 1890-91 which was explained in the annual excise report to be due to competition at the auction of monopoly. There is no evidence of any increase or decrease of use.

Coorg.

404. In Coorg the import of ganja amounts to 21 maunds and registered consumption to 14. The population is 173,055. The retail price is 14 annas to 1 rupee for a sér of 24 tolas, or approximately $\frac{5}{8}$ anna per tola. Taking the minimum individual allowance at $\frac{1}{4}$ tola or $\frac{1}{6}$ anna per diem, the annual individual consumption comes to 90 tolas, and the cost to something less than Rs. 5. This is a reasonable allowance. The consumers would number about 1,000, or between ·5 and ·6 per cent. of the population. It is probable that the consumption tends to increase with the influx of coolies into coffee and cardamom estates.

Baluchistan.

405. There is no information of the quantity of hemp drugs consumed in any part of Baluchistan. Bhang and ganja appear to come from India, and charas and chur ganja from Afghanistan as well as India. The Deputy Commissioner of Thal Chotiali reports that the Baluchis and Pathans of that district are not addicted to the drugs; but there is information from other quarters that the Baluchis and Pathans generally do smoke. The drinking of bhang would appear to be confined to Pathans and Indians. It is said that the consumption of the drugs is decreasing as the Indian population, which was larger when military operations were going on, is being reduced. The average prices seem to be Re. 1 for bhang, Rs. 20 for charas, and Rs. 78 for ganja per sér.

Burma.

406. It has been shown that the hemp drugs, or ganja at least, are smuggled into Burma in considerable quantity. But it is impossible to say to what extent the Indians manage to supply their wants, or with any accuracy the price they have to pay for the drug. There does not seem to be any use by the Burmans or people other than the natives of India. The inquiries made by the Commission tend to show that the quantity introduced into the country is increasing.

Hyderabad, Mysore, Rajputana, Central India, and Baroda.

407. It is hardly worth while to examine in detail the statistics and evidence relating to the extent to which the hemp drugs are used in the great Native States and Agencies. These territories are surrounded and intermingled with British territories, regarding which the question has been fully discussed, with the result that the statistics were found in most cases to be far from an accurate index of consumption, and the evidence did not justify very precise conclusions. More definite results, or equally definite, will certainly not be obtained from the information supplied by Native States. The extent of use in each part of these territories may be taken to resemble that in the neighbouring British provinces. The use of ganja will be found to prevail over the States of the Central India Agency as it does in the North-Western Provinces, Bengal, and the Central Provinces. The use of bhang will be more common than that of the other drugs in Marwar and the north-western parts of Rajputana, and it will extend southwards towards the Bombay Presidency, and eastwards towards the States of Central India.

gradually meeting with more competition from ganja. A moderate use of charas will be found all over the States which are within easy reach of the Punjab and the North-Western Provinces. The extent of use of ganja in Hyderabad will be fairly well indicated by the estimates of Berar, the Bombay Presidency, and Madras as regards the parts of the State contiguous to those provinces, and a similar process of examination will give the consumption of Mysore. In these two States bhang as a separate form of the raw drug has practically disappeared, but charas finds a few consumers in Hyderabad. Baroda consumption is the same as that of the northern part of Bombay Presidency.

Kashmir and Nepal.

408. In Kashmir and Nepal the wild plant furnishes the whole, or a very large share, of the consumption—a fact which renders useless for present purposes the figure of production given in the Kashmir evidence, and of import from Bengal into Nepal which can be derived from the Bengal statistics.

Army.

Real extent of the use of the hemp drugs not ascertained.

409. The inquiries made in the army have elicited replies from 274 regiments, batteries of artillery, and special corps in the service of the British Government and Natives States. If commanding officers had found it possible to take an accurate and complete census of the consumers of the hemp drugs among the sepoys and other natives attached to their corps, the result would have been of the greatest service in determining the extent to which the hemp drugs are used among the various races and castes and the population generally. But the cases are few in which the inquiry has elicited information on the point which has the appearance of being complete. It would therefore be misleading to compile and tabulate the results in statistical form. Several enquiring officers report that their men will not admit the use of the hemp drugs, though it is certain that they are taken to some extent. And in many cases there are special reasons for this reticence in addition to the disrepute attaching to the habit in native society generally. In some regiments the use of the drugs is directly prohibited, and in others the commanding officers, though they may not have gone this length, regard the consumers with distrust. It must be the case also that in some regiments the consumers are held in greater disrepute among their comrades than in others. In many it is apparent that the inquiry was distasteful to the men, and in some that the commanding officers were not very insistent in pressing it. Keeping in view these reasons for distrusting the figures, it will not be prudent to do more than indicate a few general features of the hemp drug habit as it prevails in the native armies.

Extent of use reported.

410. There are regiments in all three presidencies and in the Native States in which the hemp drugs in one form or other are shown to be used by 5 per cent. of the men and followers. Forty-nine out of the 274 corps come under this category, and the number evidently falls far short of the truth. In some corps the number of consumers is far higher than 5 per cent. In some corps the use, if the reports are to be taken literally, does not exist, or is quite infinitesimal, or is practically confined to the followers. The consumption in these corps is no doubt trifling in most cases, but it is difficult to accept it as fact as regards any regiment that the drugs are not used at all, especially in regiments of Sikhs, who are extremely partial to bhang.

Little evidence of excessive use.

411. As regards the character of the habit, the smokers are for the most part regular smokers, and the drinkers indulge occasionally, and principally in the hot weather. In these respects the habit resembles that of the civil population. It is natural that excess should be comparatively uncommon in bodies of men living under strict discipline. It has been found that even in the police, where the men have more personal liberty, the use of hemp rarely obtrudes itself.

Use of the different drugs.

412. The habit of drinking bhang is more prevalent in the corps serving in the north-western part of India, but it cannot be said that smoking is more common in one part than another. Charas is preferred in the comparatively small tract where it is cheap and easily procurable, and ganja is used elsewhere. Smoking is regarded as a protection against cold, and bhang drinking as a relief under the distress of very hot weather. The habit, therefore, varies according as regiments experience different conditions of climate, and it would seem that on service the number of smokers increases. The preparation of the drink, however, takes time, and requires certain ingredients which on service may not be obtainable. It is doubtful, therefore, if bhang drinking increases on service as smoking does, but the practice of chewing or eating the drug in a simpler form may very well take its place.

Use among principal castes of sepoys.

413. The Sikhs drink bhang and do not smoke; but it is reported of more than one Sikh regiment that the men do not use any of the drugs. In one regiment they have given up bhang for the good rum which the canteen supplies. The Gurkhas also prefer liquor, and rarely use the hemp drugs. The habit would seem to be more prevalent in the Gurkha regiments serving in Assam than elsewhere, but uncommon even there. The Rajputs and Purbhias seem to be more given to the drugs than other castes. There is some strictness among the Muhammadans in some of the regiments of the north of India in regard to both smoking and drinking of hemp; but in Madras they appear to have the full proportion of smokers among them.

Evidence indicates decrease of use in the army.

414. The very great majority of the replies state that the use of the drugs is decreasing, and among the 38 which take the opposite view, 13 do not refer to the troops, but to the civil population. Some replies also are not very definite. There are hardly more than 20 out of the 274 which can be said to be evidence on the side of increase. The actual facts on which increase is alleged are not often stated, but the commandant of a Bengal Cavalry regiment finds that 25 years ago not a man in the regiment used the drugs, while now some do, especially among the later enlisted men. The causes of increase, when they are stated, which is very rarely, are the cheapness of the drugs as compared with liquor, the speedy action and convenient form of charas, and the religious objection to the use of liquor. On the other hand, there is a strong body of evidence on the side of decrease. The cause which appears most prominently in the replies is the greater demand which service makes in these days on the time and intelligence of the sepoy. He cannot spare the time to indulge in the drugs, which involves the laborious preparation of bhang as drink, and the period of listlessness and incapacity which follows an ill-regulated dose either

as drink or smoke. And he is said to be conscious that the habit renders a man less fit for the things he has to do and learn. In many regiments the prohibition is credited with having had a decided effect in reducing the practice. In some it is said that the older men, who have the habit, are retiring, and making room for young men, who, entering the more intellectual school of soldiering, do not readily acquire it. This is in direct contrast with the evidence from a Bengal Cavalry regiment quoted above, and it is for this reason the quotation was made. Both opinions are apparently based on observation, and that in favour of decrease has a great number of adherents, while the officer who holds the other stands almost alone. The point is of general interest as touching on the quality of the modern recruit apart from the hemp question. The rise in the price of drugs is alleged in some quarters as a cause of decrease, and in others the cheapness of liquor. It is probable that liquor is competing with drugs in the army as it is doing among the better classes of the civil population.

Varieties of ganja.

415. Ganja issues from the Ganja Mahal of Bengal in three forms—flat, round, and chur. Their relative value arises from the fact that round ganja is more free of useless stick and leaf than flat ganja, and chur is even more pure than round ganja. The first two kinds are reduced to chur or fragments as a necessary preliminary to smoking, but it is possible that a small amount of leaf always adheres to the lumps of compressed flowers even when they have been detached from the stick. Nevertheless in this reduced form the three kinds are practically the same, and many persons have no preference in regard to them. The evidence on this point is not, however, unanimous, and in Calcutta, the 24-Parganas, Nadia, and the Burdwan and Orissa Divisions round ganja alone is sold, while the flat kind is consumed throughout the rest of the province. It is doubtful if this distribution is caused by any choice of the consumers. The explanation is probably to be found in the convenience and profit of the dealers in respect of the avoidance of waste and economy of carriage. The recent sudden increase in the consumption of chur tends to confirm this view, for Mr. Gupta explains that it was caused by the discovery that this kind was more lightly taxed in proportion to the amount of narcotic matter present in it. As regards their general use, therefore, these three kinds of ganja do not need to be distinguished, and the names even are not current outside Bengal. It may be said that every presidency, province, and almost every Native State outside Bengal, has a certain amount—it may be very small—of home-grown ganja. This drug is of various qualities, from the produce of the wild plant in certain parts to that of the skilled and regular cultivation. There are local names for the drug, but it is essentially the same everywhere, varying in strength and flavour. Bengal ganja holds the first place in public favour. In Assam it is distinguished by the epithet *mohini*. Only a small quantity of it goes out of Bengal to the North-Western Provinces and the peninsula of India, but the fame of it is carried all over the country by the religious wanderers, and its name *baluchar* is very widely known.

Manner of smoking ganja.

416. Ganja is used principally for smoking,—almost wholly for that purpose in Bengal, where it is so expensive. The process of preparing the drug for smoking, the kind of *chillum* or pipe that is used, and the manner of inhaling the smoke are the same all over India. A small quantity of ganja, about $\frac{1}{16}$ of a tola, is kneaded in the

palm of the left hand with the thumb of the right, a few drops of water being poured on it from time to time. When it ceases to part with any colour to the water, it is ready to be smoked. The *chillum* is a bowl with a short neck issuing straight from the bottom of it, all made of clay; the same that is commonly used for smoking tobacco. It is laid with a foundation of a small quantity of tobacco. On this is placed the washed ganja which has been chopped up and another thin layer of tobacco. A live coal is placed on the charged pipe, a damp cloth is generally wrapped round the neck of it and folded into the palm of the left hand, while the pipe is grasped by the neck between the thumb and first finger. The right hand is pressed, fingers upwards, against the cloth and neck of the pipe, and the draught is made through the space between the thumb and first finger of this hand. A few short breaths are blown and drawn to light up the pipe, and when this is accomplished one long deep draught is taken with the lungs. The pipe is then handed on to a companion, and so goes the round of the circle.

Manner of smoking charas.

417. In Bengal charas is only used by people in good circumstances. It is in the Punjab and North-Western Provinces that most is to be learnt about the ordinary method of consuming it. It varies in quality and price, and is often very much adulterated. It is almost wholly used for smoking. A quantity, not larger than is usually put into the ganja pipe, is buried or kneaded up in two or three times the quantity of tobacco in the form (*gurakhu*) in which it is prepared for smoking with the *huka*. The *huka* is then smoked in the ordinary way, the draught being taken into the lungs. Dry tobacco may be used instead of the prepared tobacco, and the *chillum* instead of the *huka*.

Other ways of smoking.

418. Ganja also is sometimes smoked in the *huka*, and other implements and means of smoking are mentioned. Thus in Bombay and the Central Provinces epicures occasionally use a pipe made of sugarcane in preference to the *chillum*. There are also certain rude expedients in vogue amongst jungle people for the smoking of tobacco, which are no doubt resorted to in connection with the hemp drug, and some of which appear in the evidence. The pipe bowl may be constructed in the ground, and a reed used to communicate with the mouth. A pipe or cigarette may be made with leaves. The leaf cigarette containing a mixture of tobacco and hemp leaves is spoken of in the Madras Presidency. A green branch of the *Euphorbia neriifolia* can be readily fashioned into a pipe, and is commonly used on emergency in the Satpura Hills. And in connection with the smoking of charas, there appears to be a custom at religious gatherings in Upper India for religious mendicants to sling a huge *chillum* containing a sér or more of the drug to a tree so that all comers may partake of it. Bhang, *i.e.*, hemp leaves, or the very inferior kinds of ganja or ganja refuse, is only smoked under the compulsion of poverty or want of the better article.

Mixture of spices in smoking.

419. The above are the simplest forms in which the drugs are smoked. But the well-to-do are fond of flavouring the pipe with spices. The mixture with tobacco has the effect of making the pipe burn properly and go further, and of diluting the smoke which is inhaled; but other explanations are given of the reason for using tobacco with the drugs. Spices give fragrance and flavour to the pipe, and possibly, some of them, pungency. Those commonly used are musk, mace, saffron,

cloves, cardamom, keori (the male flower of *Pandanus odoratissimus*), rose, leaves, attar, nutmeg, ginger, betel-nut, and betel-leaves.

Mixture of potent drugs in smoking.

420. Powerful and noxious drugs are occasionally introduced into the pipe; but this practice is confined to excessive consumers, and among them to a mere proportion only, on whom hemp alone has ceased to produce the desired effect of exhilaration or stupefaction. The seeds of dhatura are by far the commonest ingredient of this class. The next place should probably be taken by opium, and then follow arsenic and nux vomica, aconite, and the root of *kanher* (*Nerium odorum* or *Thevetia neriifolia*, the latter of which is known among the natives as yellow *kanher*), and after these may be mentioned certain substances to which the consumers attribute poisonous or intoxicating properties, or at least the virtue of enhancing the potency of the hemp. Such are hemp seeds, the root of the cold-weather *jawari* (*sorghum* of the kind called *ringni* in the Central Provinces and *shalu* in Bombay), the root of rice, the juice of the *madar* (*Callotropis gigantea*), and the skins and poison of snakes; and, lastly, cantharides is sometimes mixed for a special purpose. It is said that the *jawari* root is sometimes soaked in liquor to increase its potency. In describing these admixtures, distinction has not been made between charas and ganja smoking because the use of the ingredients is a matter of individual caprice, and they do not form part of any recognized preparation of the hemp drugs.

Simple preparation for drinking.

421. As with smoking, so in the case of drinking, there is a common and simple form, and also various compounds more or less elaborate. The simple form is merely to pound the drug very fine with a little black pepper, add water according to the strength of the drink desired, and filter the decoction through a cloth. This beverage is sometimes made with the bhang composed almost entirely of the leaves of the plant, and sometimes, most commonly outside Bengal, the North-Western Provinces, and the Punjab, of the flower heads or mixture of flower and leaves that has come away in the course of the manufacture of ganja. It goes by different names in various parts of India. In Bengal it is commonly called bhang or siddhi; in the North-Western Provinces bhang, siddhi, or *thandai*; in the Punjab, Bombay, and Central Provinces bhang or *ghota*; and in Sind *ghota* and *panga* according to its strength. In Madras the simplest form of preparation seems to be very little used, but when it is, it is probably called bhang or subzi. The Madras preparation called *ramras* or *ramrasam* seems to correspond to the *dudhia* of Upper India. The common names may be taken to include all forms of beverage made from the hemp drugs, except those which have special names of their own.

Spiced preparations for drinking.

422. There is next a class of beverages in which the hemp drug and pepper are supplemented by harmless perfumes and spices, the whole enriched, it may be, with sugar and milk or curds. Every bhang drinker who can afford it adds some or other of these ingredients. The spices most commonly used are anise, fennel, coriander, dill, *ajwan* (*Ptychotis*), cucumber and musk-melon seeds, almonds, rose leaves, cloves, saffron, and cardamom. But many others of the same class of innocent ingredients are mentioned, *viz.*, hemp and poppy seeds, mace, mint, cummin, endive, parsley, musk, betel-leaves, keori, attar, cinnamon, lotus seeds, the seed of hollyhock, the kernels of pistachio and *charoli* (*Buchanania*

latifolia), asafœtida, liquorice, cubebs, chillies, and senna leaves. The juices of fruits and trees are also employed in the concoction, such as that of the pomegranate, grape, mango, bael, cocoanuts, and date (not toddy).

Mixture of potent drugs for drinking.

423. The above ingredients are used by all moderate consumers according to their taste and means. There are others which by their potency, their uncommonness, or their quaintness are designed to meet the craving of consumers whom the compounds in ordinary use fail to satisfy. Here again dhatura takes the first place, and evidence is not wanting that the seeds of this plant are sometimes kept in stock by the grocers who supply the other ingredients, if not by the sellers of the drugs. Besides dhatura, opium, arsenic, strychnine, aconite, the oleander root, and seed of black henbane are mentioned as being introduced into hemp drinks. A mixture of two or three of these with the hemp drugs in one or two forms, and perhaps one or two other fanciful ingredients, goes by the cant name of *panchratna* (the five jewels), *panchrangi*, or *panjtul*. The name is apparently applied to this sort of compound, and sometimes even to more innocent ones, whether it is to be used for eating, drinking, or smoking. The poison of copper is sometimes utilized by making the decoction in a copper vessel, or putting copper coins into it while it is being prepared.

Curious ingredients for drinking.

424. There is still another class of ingredients, which are used because they are believed to have a certain efficiency of their own, or to be instrumental in enhancing the power of the hemp drug. These are the roots of grass, of rice, and of jawar, the manna and rotten knots of bamboo, soot, cobwebs, decayed string, the juice of the *ak* (swallow wort), and the root of *mothk*. These are, of course, to be regarded as curiosities of the subject, though the mention of the *jawari* root is rather frequent. As in the case of smoking, cantharides is very rarely mentioned as an ingredient.

Use of hemp drugs with alcohol.

425. The hemp drugs are sometimes used to doctor alcoholic drinks. In the Punjab the name *lutki* is given to a concoction of this kind. In Baluchistan there is also said to be a drink called *mudra*, which is compounded of dhatura, bhang, alcohol, and opium. The drink is also known in the Punjab. In other quarters the hemp drugs are said to be smoked after drinking liquor to add to the intoxication. The evidence of the association of the hemp drugs with alcohol in these ways is fortunately scanty. The practice is probably rare, for it implies a recklessness in intemperance which is foreign to the Indian character.

Boja.

426. There is a liquid preparation of ganja in use in the Sholapur district of the Bombay Presidency which seems to be little known elsewhere. It is called *boja*, and its preparation is described by Bombay witnesses 25 and 47. The consumption is considerable, amounting in the year 1891-92 to 138,100 sérs. It appears to consist principally of a gruel made from *jawari*, and to contain a comparatively small proportion of hemp and a little nux vomica. After brewing, it has to be kept a day, when water is added, and it is drunk.

Hemp decoctions sometimes kept ready made.

427. Bhang drink is kept for sale in Karachi. Witness 5 from Sind says that the refreshment is prepared and kept in readiness to be supplied gratuitously for the use of visitors

and passers-by in almost all the places of worship. The same practice is indicated in the evidence of the manager of the *dharamsala* near Athari in the Punjab. Mr. Drummond describes a social custom of the same kind as prevailing among the Hindu Jats in the south-eastern districts of the Punjab.

Simple form of eating hemp.

428. Ganja and bhang are eaten as well as drunk. Charas, if medicinal uses be excepted, is very rarely consumed in any other way but in the form of smoke. The simplest form of eating ganja and bhang is to pound them up with such spices as were mentioned in the preparation of bhang, and to swallow the paste in the form of a bolus. The mass is sometimes compounded with molasses or *gur*. The leaves of the green plants are even chewed on occasion. It does not, however, appear to be a regular practice with any people in any part of India to consume the drugs in this manner. The habitual bhang drinker will do it when he has difficulty in preparing his drink. It is done on a journey. It would seem to be more common to eat the paste in the cold weather than the hot. A mass will sometimes be prepared and kept for use day by day. This paste is known in the Punjab, Berar, and Bombay as *fakki* or *fanki*, and it seems to be used by the poor not uncommonly.

Hemp sweetmeats.

429. There is, however, a very considerable consumption of sweetmeats made with ganja or bhang, or even sometimes charas. They are all prepared in very much the same way, their various names and properties depending on the proportion of the hemp drugs and other ingredients that they contain. Their basis is sugar and milk, and the essence of the hemp drug is extracted by the aid of heat, and compounded with them with other drugs and spices or perfumes. The most common of them is majum, and the preparation is known by that name from one end of India to the other. It is largely used at certain Hindu feasts. It is evidently credited with aphrodisiacal qualities. Many people consume it habitually, either throughout the year or in the cold season, abandoning it in the hot in favour of the liquid preparations. The names of other similar preparations are *yakuti* (in general use from the Deccan northwards), *purnathi* (Madras), *gulkhand* (Bombay), *shrikhand* (Bombay), *halwa* (in general use), and many others. These preparations are all considered to be aphrodisiacal, some to such a degree that they should perhaps be regarded as medicinal forms rather than articles of ordinary consumption. It is stated that in preparing these mixtures copper vessels are sometimes used or copper coins immersed in the process, and doubtless the toxic and tonic drugs mentioned in connection with the preparation of drinks sometimes enter into them.

Various ways of using hemp for consumption.

430. Hemp is sometimes compounded into cakes made of gram flour. It is used as a seasoning in the cooking of various dishes, those composed of meat as well as others. More than one witness in more than one province mentions this use at parties to make fun of the guests. A witness from the Punjab describes how powdered bhang is sometimes wrapped in dhatura leaves, the whole enclosed in a covering of clay and baked. It is not clear whether the cooked substance is eaten or drunk. It might be either. Witnesses, speaking of the northern part of the Bombay Presidency, state that gram and dates are sometimes charged with hemp. And in Calcutta the drug is occasionally used to flavour ice-cream.

CHAPTER IX.

SOCIAL AND RELIGIOUS CUSTOMS.

Scope of this Chapter.

431. In the instructions issued to the Commission by the Government of India, reference is made to the use of hemp drugs among fakirs and ascetics who are held in veneration by large classes of the people, and to the custom, which is believed to obtain to a large extent in Bengal, of offering an infusion of bhang to every guest and member of the family on the last day of the Durga Puja. The Commission were instructed to ascertain to what extent these and similar customs prevail in Bengal and other parts of India, and how far the use of hemp drugs forms a part of social, or possibly religious, ceremonial or observance. Questions 32 and 33 of the Commission's questions were intended to elicit information on these points.

Bengal.

432. In Bengal there is a considerable body of evidence dealing with these customs, and more particularly with the custom of offering an infusion of bhang on the last day of the Durga Puja. Some few witnesses, it is true, state either that no social or religious custom with which hemp drugs are connected exists, or that they are unaware of any such custom; but the great majority of the witnesses either give an account of them more or less full, or allude to them briefly as matters of common notoriety.

Durga Puja.

433. The custom of offering an infusion of the leaves of the hemp plant to every guest and member of the family on the Bijoya Dasami, or last day of the Durga Puja, is common in Bengal, and may almost be said to be universal. It is alluded to by many of the witnesses who refer to its use on this occasion as well as on other days of the Durga Puja festival. But, while there can be no doubt as to the existence of the custom, there is considerable divergence of opinion as to the true nature of it. The custom itself is a simple one. On the last day of this great festival the male members of the family go forth to consign the image to the waters, and on their return the whole family with their guests exchange greetings and embrace one another. During this rejoicing a cup containing an infusion of the leaves of the hemp plant is handed round, and all are expected to partake thereof, or at least to place it to the lips in token of acceptance. Sweetmeats containing hemp are also distributed. Opinion is almost equally divided as to whether the custom is a mere social observance, or whether it is an essential part of the religious ceremonial of the festival. There is difference of opinion among the witnesses as to whether there is any injunction in the *Shastras* rendering obligatory the consumption of hemp; but Tantric religious works sanction the use, and the custom, whatever be its origin, may now be said from immemorial usage to be regarded by many people as part of their religious observances. From the evidence of the witnesses it would appear that there is no specific direction in the *Shastras* of the manner in which the drug should be used, but from the references quoted it would appear that the use alluded to is that of bhang in the form of an infusion. Witnesses who can speak with authority on the subject, such as Mahamahopadhya Mahesa Chandra Nyayaratna, C.I.E., Principal of the Government Sanskrit College, Calcutta, testify to religious sanction for the use of bhang or siddhi, while many witnesses of high social position, well

acquainted with the habits of the people, as, for example, Maharaja Sir Jotindra Mohan Tagore, K.C.S.I., Maharaja Durga Charan Law, Raja Piari Mohan Mukharji, C.S.I., Rai Rajkumar Sarvadhikari Bahadur, Rai Bahadur Kanai Lall Dey, C.I.E., and others, speak to the prevalence of the custom, its intimate association with the religious devotions of the people, and the innocent harmlessness of the practice.

Other occasions on which bhang is used.

434. The custom described above, and which refers solely to bhang as distinguished from other preparations of the hemp plant, is the most important occasion on which bhang is used as a part of social or religious ceremonies; but there is evidence to show that the drug in this form is used at other festivals. For example, at the Holi festival, which is observed more generally in Behar than in other parts of the Lower Provinces, bhang is commonly consumed; and, according to many witnesses, at such festivals as the Diwali, Chait Sankranti, Pous Sankranti, Sripanchami, Sivachaturdasi, Ramnavami, and indeed on occasions of weddings and many other family festivities. But, so far as the evidence shows, the use on those occasions is a matter of social custom observed more generally in some parts of the province than in others, and, although no doubt there may be some who consider it essential to their devotions, partaking but little of the nature of general religious observance. In Orissa bhang is largely used by the attendants and worshippers at the temple of Jagannath at Puri; and there appears also to exist a custom, somewhat similar to that of the Durga Puja in Bengal, of offering siddhi or bhang in the form of sweetmeats to the god Ganesh, which are then eaten by the worshippers and their friends and relatives. This festival, called the Ganesh Chaturthi, occurs in the month of Bhadro (August-September).

Connection of ganja with the worship of Siva.

435. It is chiefly in connection with the worship of Siva, the Mahadeo or great god of the Hindu trinity, that the hemp plant, and more especially perhaps ganja, is associated. The hemp plant is popularly believed to have been a great favourite of Siva, and there is a great deal of evidence before the Commission to show that the drug in some form or other is now extensively used in the exercise of the religious practices connected with this form of worship. Reference to the almost universal use of hemp drugs by fakirs, jogis, sanyasis, and ascetics of all classes, and more particularly of those devoted to the worship of Siva, will be found in the paragraphs of this report dealing with the classes of the people who consume the drugs. These religious ascetics, who are regarded with great veneration by the people at large, believe that the hemp plant is a special attribute of the god Siva, and this belief is largely shared by the people. Hence the origin of many fond epithets ascribing to ganja the significance of a divine property, and the common practice of invoking the deity in terms of adoration before placing the *chillum* or pipe of ganja to the lips. There is evidence to show that on almost all occasions of the worship of this god, the hemp drugs in some form or other are used by certain classes of the people. It is established by the evidence of Mahamahopadhya Mahesa Chandra Nyayaratna and of other witnesses that siddhi is offered to the image of Siva at Benares, Baidynath, Tarakeswar, and elsewhere. At the Shivratri festival, and on almost all occasions on which this worship is practised, there is abundant evidence before the Commission which shows not only that ganja is offered to the god and consumed

by these classes of the worshippers, but that these customs are so intimately connected with their worship that they may be considered to form in some sense an integral part of it.

436. The special form of worship by the followers of Siva, called the Trinath or Tinnath Mela, in which the use of ganja is considered to be essential, is mentioned by many witnesses, and deserves more than a passing notice. A full account of this religious practice given by Babu Abhilas Chandra Mukharji will be found in Vol. III Appendices of this Report. The origin of the rite, which it is said sprang up first in Eastern Bengal, appears to be of recent date, about the year 1867. It appears to be observed at all times and at all seasons by Hindus and Muhammadans alike, the latter calling it Tinlakh Pir. When an object of special desire is fulfilled, or when a person recovers from illness, or a son is born, or a marriage or other ceremony is performed, the god Trinath, representing in one the Hindu trinity, is worshipped. Originally one pice worth of ganja, one pice worth of oil, and one pice worth of betel-nut was offered to the god. But now ganja—it may be in large quantities—is proffered, and during the incantations and the performance of the ritual it is incumbent on all present to smoke. This form of worship is shown to have spread extensively throughout Eastern Bengal andthe Surma Valley of Assam, and, according to one witness, it has penetrated even to Orissa. On the other hand, there are a few witnesses who say that the practice is gradually dying out.

Trinath.

437. The use of hemp drugs is as a rule in no way connected with orthodox Muhammadan observances, whether social or religious. The Muhammadan religion condemns such practices.

Muhammadans.

438. In Assam, where the use of hemp drugs is but little practised by the Assamese proper, there appear to be no indigenous customs connected with the drugs. But the customs prevailing in Bengal are also found in Assam. There is evidence as to the use of bhang or siddhi at the Durga Puja, and of ganja by the worshippers of Siva. In Sylhet the Trinath form of worship appears to prevail to a considerable extent. With reference to this practice, one witness (Prasanno Kumar Das) observes that "in the Surma Valley ganja is offered in the name of Pir (Muhammadan saint) for the benefit of the cattle."

Assam.

439. In the North-Western Provinces, where the celebration of the Durga Puja is not so generally observed as in Bengal, a considerable number of witnesses (some fifty in all) state that there are no customs, religious or social, with which these drugs are connected. But, on the other hand, there is overwhelming evidence to establish the almost universal use by the people of bhang at the Holi festival, and some evidence as to the common use of ganja by certain classes of the followers of Siva at their festivals and seasons of worship. Of the witnesses who speak to the use of ganja in connection with religious observances, 22 state that it is essential and 92 that it is not essential. As to whether the use of bhang should be regarded as a purely social custom or as essential to religious observance, the opinion of witnesses who speak on the point is about equally divided. It is sufficient

North-Western Provinces.

to say that the custom is now a general one, and that where the Holi festival is observed, there the practice of consuming bhang during its observance is common. On other occasions, such as the Diwali festival, marriages, and family festivities, there is evidence to show that among certain classes the consumption of bhang is common. Allusion is also frequently made to the habit of using bhang, to which, for example, the Chaubes of Mathra and Brindaban are notoriously addicted, but how far the habit is connected with the religious observances at the temples the evidence does not justify the formation of an opinion. A custom is mentioned by a Kumaon witness, Dharma Nand Joshi, who states that a class of people called *Kouls*, who worship spirits, meat, fish, etc., have the bhang plant as one of the objects of their worship.

Punjab.

440. In the Punjab there is evidence as to the general use of hemp by some of the followers of Siva, and especially of bhang, at the Holi, Dasehra, Diwali, and other festivals, and on the occasion of marriages and other family festivities. Among the Sikhs the use of bhang as a beverage appears to be common, and to be associated with their religious practices. The witnesses who refer to this use by the Sikhs appear to regard it as an essential part of their religious rites having the authority of the Granth or Sikh scripture. Witness Sodhi Iswar Singh, Extra Assistant Commissioner, says :—

"As far as I know, bhang is pounded by the Sikhs on the Dasehra day, and it is ordinarily binding upon every Sikh to drink it as a sacred draught by mixing water with it.

"*Legend*—Guru Gobind Singh, the tenth guru, the founder of the Sikh religion, was on the *gaddi* of Baba Nanak in the time of Emperor Aurangzeb. When the guru was at Anandpur, tahsil Una, Hoshiarpur district, engaged in battle with the Hill Rajas of the Simla, Kangra, and the Hoshiarpur districts, the Rajas sent an elephant, who was trained in attacking and slaying the forces of the enemy with a sword in his trunk and in breaking open the gates of forts, to attack and capture the Lohgarh fort near Anandpur. The guru gave one of his followers, Bachittar Singh, some bhang and a little of opium to eat, and directed him to face the said elephant. This brave man obeyed the word of command of his leader and attacked the elephant, who was intoxicated and had achieved victories in several battles before, with the result that the animal was overpowered and the Hill Rajas defeated. The use of bhang, therefore, on the Dasehra day is necessary as a sacred draught. It is customary among the Sikhs generally to drink bhang, so that Guru Gobind Singh has himself said the following poems in praise of bhang: 'Give me, O Saki (butler), a cup of green colour (bhang), as it is required by me at the time of battle' (*vide* 'Suraj Parkash,' the Sikh religious book).

"Bhang is also used on the Chandas day, which is a festival of the god Sheoji Mahadeva. The Sikhs consider it binding to use it on the Dasehra day. The quantity then taken is too small to prove injurious."

As Sikhs are absolutely prohibited by their religion from smoking, the use of ganja and charas in this form is not practised by them.

A unique custom of dispensing bhang at a religious charitable institution is that mentioned by witness Baba Kirpa Singh. The institution, as a relic

of old Sikh times, is annually permitted to collect without interference a boat load of bhang, which is afterwards distributed throughout the year to the sadhus and beggars who are supported by the *dharamsala.*

Central Provinces.

441. The evidence as to social or religious customs in the Central Provinces is somewhat discrepant, but on the whole points to the existence of customs akin to those existing in the North-Western Provinces. The use of bhang at the Holi and Diwali festivals and at marriages and such occasions, and of ganja or bhang in connection with the worship of Siva, is frequently mentioned by the witnesses. A few local customs are also mentioned by some witnesses. Regarding a custom of the Chamar caste, the Rev. Mr. Jacob says: "At Chanda, the Chamars use ganja dust in the preparation of a beverage called *gulabpani*, which is drunk at a ceremony called *dadhi* (the first shaving of the beard), when no liquor is permitted." Among the Gonds, Cowasjee Nusserwanjee Hattidaru describes the following custom as existing: "In the funeral ceremony amongst the Gonds of these provinces, *kalli* or flat ganja is placed over the chest of the dead body of the Gond, and when the funeral party returns home, a little of the ganja is burnt in the house of the dead person, the smoke of which is supposed to reach the spirit of the dead." Another Satpura witness, Hosen Khan, mentions a custom of offering "a little ganja at the Chitarai Debis, or collections of stones with rags tied to some tree above. They offer either a cock or a cocoanut or some ganja. It is a custom among travellers. These Chitarai Debis are in the open, and the travellers have a smoke at the same time." One witness states that he has heard of the hemp plant being worshipped in the Berars, but this is not corroborated by any of the witnesses from these districts. Another has heard that the Gonds in their hill homes are worshippers of the plant.

Madras.

442. In the Madras Presidency, where the use of hemp drugs is less common than in most other provinces, many witnesses assert that there are no customs, social or religious, with which they are connected, and the evidence as a whole fails to establish the prevalence of any customs so general as those connected with the Durga Puja and the worship of Siva in Bengal or the Holi festival in the North-Western Provinces. But there is evidence as to the existence of customs of a less general or widespread nature. In Ganjam, the witnesses speak to the common use of bhang on the *Mesha Sankranti* day in honour of Siva and Anjanayya, and also in the worship of Durga. Several also allude to a custom of offering a confection or draught containing bhang to the image at the temples of Hanuman. At the festival of Kama, the Indian cupid, bhang is freely made and drunk according to several witnesses. The Rajputs or Bondilis are particularly referred to in connection with this custom. On occasions of holidays or gala-days, and at the Mohurram, a number of witnesses say it is usual for Muhammadans as well as Hindus to take bhang. It is also said that various intoxicants, including ganja, are sometimes offered to the gods in worship, and then swallowed by those offering them. Witness M. Sundaram Iyer, Deputy Tahsildar (60), says: "Some of the lower orders make use of ganja as an offering, like cocoanut, plantains, liquor, and such other articles, for certain deities, such as Mathuraveeran, Muniappan, etc., according to the vow taken by each person. This

cannot be considered as essential, but is only a practice observed in very rare cases. Such practice is not followed by many people, and it is not injurious." Others allude to the offering of ganja to Karuppannam, Kali, Mathuraveeran, Muniappan, Karuannaswami, and Aiyaswami, more particularly in the south of the Presidency. Mr. Azizuddin, Sahib Bahadur, Deputy Collector, says: "Neither the Musalman nor the Hindu religion requires the use of these drugs on religious occasions. On the other hand, it is prohibited. Nevertheless, in the *maths* of bairagis, such as at Tripati, and of Muhammadan saints, such as at Nagore, Conjeveram, Arcot, and other places, the manager of the shrine distributes ganja to all the fakirs who assemble during the festival. In none of these places, religiously speaking, ganja should be distributed, but, according to custom among the fakirs, its distribution is essential." The Rev. Mr. Campbell says that ganja is used in connection with the funeral ceremonies observed by certain classes, but that the use is not essential. Mr. Merriman alludes to a custom of offering and consuming bhang at the funeral of bhang consumers.

Bombay.

443. An interesting note, entitled "The Religion of Hemp," by Mr. J. M. Campbell, C.I.E., will be found in Vol. III Appendices. In the Bombay Presidency the use of hemp in connection with the worship of Siva, Mahadev or Shankar appears to be very common. It is referred to by many witnesses. The following description of this custom as prevailing in part of Gujarat, Kaira, and probably Ahmedabad has been furnished to the Excise Commissioner by Mr. B. E. Modi, Deputy Collector:—

"On the Shivratri day (the last day but one of the month of Magh), sacred to the god Mahadev or Shankar, bhang water is freely poured over the *lingam*. Mahadev is an ascetic, and is fond of bhang, and on this day it is considered a religious duty to offer him his favourite drink. From this day to the 11th day of Ashad, on which day gods go to sleep, water is kept constantly dripping upon the *lingam* of Mahadev from an earthen pot kept above it."

Somewhat similar accounts varying in detail are given by many witnesses coming from different parts of the province, of whom some also refer to the habit which ganja smokers have of invoking the deity before placing the pipe to their lips. Others also refer to hemp as required in the worship of Baldeo and to its use at the Shimga or Holi festival. The Marwaris and some other classes appear to use bhang at marriages and other festivities. Mr. Charles, Collector of Belgaum, says that among Musalmans and Marathas the ganja plant is offered to dead relatives who used it in their lifetime at the time of the anniversary ceremonies of their death. There appears to be no special custom of worshipping the hemp plant itself. R. K. Kothavale, of Satara district, says the hemp plant is worshipped by one sect only, namely, by people from Northern India and Nepal, while Mr. Lamb, Collector of Alibag, remarks that some of the Kunbis who make offerings to the local divinities of their fields at the harvest season include a small quantity of ganja in the offerings.

Sind.

444. In Sind the customs, both religious and social, appear to be much the same as in Bombay. In Karachi and some other places bhang is generally offered to all comers on occasions of marriages, panchayats, and other gatherings; and the custom of

freely distributing bhang as a charity to all who care to partake is common both at temples and at other places of resort.

Berar.

445. In Berar there is evidence as to the use both of ganja and bhang at the Shivratri and Holi festivals and at social gatherings. The hemp plant itself is not worshipped, but, according to one witness, when a consumer dies, the plant is kept near his corpse during the funeral ceremony.

Ajmere-Merwara.

446. At the Holi and the Shivratri and at family festivities the drugs, especially bhang, are used.

Baluchistan.

447. Major Gaisford, Deputy Commissioner, states that among the Hindu sect called Bam Bargis the consumption of bhang is regarded as essential.

Native States.

448. From Native States there is but little information regarding customs, either social or religious, with which these drugs are connected. No purely local or indigenous customs have been brought to the notice of the Commission, but there is sufficient information to show that practices similar to those existing in British provinces at the Holi and Shivratri festivals and on occasions of family rejoicings are observed by certain classes of the people in many Native States.

Worship of the hemp plant.

449. The custom of worshipping the hemp plant, although not so prevalent as that of offering hemp to Siva and other deities of the Hindus, would nevertheless appear from the statements of the witnesses to exist to some extent in some provinces of India. The reason why this fact is not generally known may perhaps be gathered from such statements as that of Pandit Dharma Nand Joshi, who says that such worship is performed in secret. There may be another cause of the denial on the part of the large majority of Hindu witnesses of any knowledge of the existence of a custom of worshipping the hemp plant in that the educated Hindu will not admit that he worships the material object of his adoration, but the deity as represented by it. The custom of worshipping the hemp plant, though not confined to the Himalayan districts or the northern portions of India alone, where the use of the products of the hemp plant is more general among the people, is less known as we go south. Still even far south, in some of the hilly districts of the Madras Presidency and among the rural population, the hemp plant is looked upon with some sort of veneration. Mr. J. H. Merriman (witness No. 28, Madras) says: "I know of no custom of worshipping the hemp plant, but believe it is held in a certain sort of veneration by some classes." Mr. J. Sturrock, the Collector of Coimbatore (witness No. 2, Madras), says: "In some few localities there is a tradition of sanctity attached to the plant, but no regular worship." The Chairman of the Conjeveram Municipal Board, Mr. E. Subramana Iyer (witness No. 143, Madras), says: "There is no plant to be worshipped here, but it is generally used as sacrifices to some of the minor Hindu deities." There is a passage quoted from *Rudrayamal Danakand and Karmakand* in the report on the use of hemp drugs in the Baroda State, which also shows that the worship of the bhang plant is enjoined in the *Shastras*. It is thus stated: "The god Shiva says to Parvati—'Oh, goddess Parvati, hear the benefits derived from bhang. The worship of bhang raises one to my position,' etc."

In *Bhabishya Puran* it is stated that "on the 13th moon of Chaitra (March and April) one who wishes to see the number of his sons and grandsons increased must worship *Kama* (Cupid) in the hemp plant, etc.".

General conclusions.

450. In summing up their conclusions on this chapter, the Commission would first remark that charas, which is a comparatively new article of consumption, has not been shown to be in any way connected with religious observance. As regards Northern India, the Commission are of opinion that the use of bhang is more or less common everywhere in connection with the social and religious customs of the people. As regards ganja, they find that there are certain classes in all parts, except the Punjab, who use the drug in connection with their social and religious observances. The Commission are also of opinion in regard to bhang that its use is considered essential in some religious observances by a large section of the community, and in regard to ganja that those who consider it essential are comparatively very few. The Commission have little doubt that interference with the use of hemp in connection with the customs and observances above referred to would be regarded by the consumers as an interference with long established usage and as an encroachment upon their religious liberty. And this feeling would, especially in the case of bhang, undoubtedly be shared to some extent by the people at large. Regarding Southern India, the same remarks apply with this reservation, that the difference between ganja and bhang as materials for smoking and drinking respectively is much less marked there, and the distinction between the two forms of the drug is much less clearly recognised, although by the term "bhang" is generally meant the drug as used for drinking, and by "ganja" the drug as used for smoking.

CHAPTER X.

EFFECTS—GENERAL OBSERVATIONS.

Prevailing ignorance of the effects.

451. There has been some difficulty in obtaining definite information regarding the effects of hemp drugs. This difficulty has not arisen from any unwillingness on the part of witnesses to tell what they know. The Rev. Thomas Evans (North-Western Provinces witness No. 229) has stated that " native officials (and even barristers and pleaders) are afraid to give evidence lest they should thereby give offence to the Government." The Commission have had no experience of this kind, and a perusal of the evidence will show that this alleged hesitation on the part of certain persons to give evidence must have been very exceptional. Witnesses are found among all classes, not excluding even drug vendors themselves, who have made strong statements against the drugs. The difficulty has arisen from the general ignorance of the subject which has not hitherto attracted special attention. One result of the labours of the Commission has been to show how much ignorance prevails regarding the consumption of these drugs and their effects. This ignorance is not confined to Europeans. It extends to a large number of native witnesses. It is not confined to those who live apart from the common people. It extends to many whose duties are believed to bring them into close and constant contact with the people. Not a few persons who were asked to give evidence declined to do so, and others did so somewhat reluctantly, on the ground that they had little or no experience of the consumption of the drugs. To quote a non-official witness on this point, the Rev. George Pittendrigh (Madras witness No. 160) says: " I have been in India for nine years. I had hardly heard the name of ganja. I had heard it occasionally in connection with bandymen and coachmen, and so on, but I had (so far as I know) seen none of its effects. I had heard that they were similar to opium—a narcotic or intoxicant. That was all I knew. It was not till after I heard of the Commission that I made any special enquiry into the matter. I enquired first of Europeans and respectable natives, students and others, graduates and other men of some standing. No one seemed to know anything about it. The ordinary caste native seemed only to know in a general way that it was used by Muhammadans, bairagis, loafers, and ruffians. Europeans seemed to know nothing of its use." The above is by no means an exceptional statement. Much the same evidence is given by officials as well as non-officials, and by natives as well as Europeans. It is not confined to one province, but is given all over India. This state of things is not difficult to explain. As a matter of fact, it is not usual for those who use the drugs, especially those who smoke them, to do so in the presence of others. It is usually only the dissipated who make a practice of publicly using intoxicants. The moderate consumer is generally known only to those who have occasion to join him at his meals or at the times when he takes his regular dose. In this country there is this additional fact to be considered, that custom is distinctly against smoking in the presence of any one who is in any sense superior or entitled to respect. Thus it would be only rarely that a man would smoke in the presence of a neighbour who had not specially come to join him. As to the casual smoker on the street or elsewhere, the passer-by would probably not know that he was consuming hemp drugs; for he smokes the drug as a rule in the same manner as he would smoke tobacco, and also mixed with tobacco, which to a certain extent

conceals the smell. On the whole, then, it is easily intelligible that respectable persons should have a very limited knowledge of the consumption of hemp drugs, and especially of the smoking of ganja and charas, except by dissipated or excessive consumers. As might have been anticipated from a careful consideration of the circumstances, the experience of a large number of witnesses, even of those who have seen something of the use of the drugs, is found to be confined to having seen palki-bearers or boatmen smoke in the midst of hard work, or to occasionally seeing a friend indulge. Some other witnesses have only known the habit as practised by such persons as fakirs or by dissipated persons who consume to excess. Some have only seen the drug used when they have gone in the way of duty, or, in pursuance of this inquiry, to shops or other places where smokers resort. The witnesses are very few who have any extensive and accurate acquaintance with consumption. Witnesses were specially warned to confine themselves to what they actually knew, and efforts were made, wherever the evidence seemed to require it, to ascertain whether they had done so.

Bias of certain witnesses.

452. In estimating the value of the evidence as to effects, this generally very limited acquaintance with the subject on the part of the witnesses has had to be borne constantly in mind. It has been necessary to decline to accept strong or dogmatic statements on one side or the other without taking pains to ascertain on what basis of fact and actual experience they have been founded. This careful inquiry into the actual basis of statements made has been found necessary also in consideration of the different points of view from which such a question as this may be regarded. Some witnesses know only the medicinal use of the drugs, and are prepared to say nothing but good of them, being really ignorant of their use as intoxicants. They know only the use of the drugs as remedial agents, carefully prescribed when necessity arises, or used as a domestic remedy in certain minor ailments. This use is sometimes confounded with the use of the drugs as stimulants or intoxicants. These uses ought to be very carefully discriminated. There are also witnesses who do know the use of the drugs as intoxicants, but know only the moderate use. These have nothing stronger to say of the drugs than would be said of alcohol by the man who only had seen a glass of wine taken at his own table or at the table of a friend. He knows nothing of the effects of excess. Others again have only experience of excessive consumption. The moderate consumer has not attracted their attention. The ruin wrought in certain cases by excess has alone attracted their notice. They feel towards these drugs as that man feels towards alcohol whose experience has been mainly gained among the social wrecks of the lowest parts of a great city. In view of all this, the Commission were careful to do what they could to ascertain the basis of the opinions and closely to examine the facts laid before them. Striking statements made by some of the most careful and intelligent witnesses as to the change in their views when they became aware of the great extent of the moderate consumption of these drugs, the effects of which they had only seen in cases of deplorable excess, will be referred to later on in dealing with insanity and other effects. This ignorance of the effects of hemp drugs on the part of some able, intelligent, and benevolent men, however it may be explained with reference to the above considerations, must still be regarded as indicating that the injury caused by the drugs is comparatively trifling. It must have attracted more attention had evil effects been at all common in comparison with the extent of consumption.

453. Before proceeding to discuss the evidence regarding the effects produced by the drugs, it will be well to notice briefly one or two preliminary questions. One of these is the different effects of the different forms of hemp drugs. Witnesses were requested to compare the effects of ganja and charas, and there is a considerable body of evidence on this subject. Inasmuch as charas is theoretically the pure resin extracted from the hemp plant, and the resin is the active principle in all varieties of the drug, it might be expected that this would be everywhere the strongest form in which the drug is found. But the evidence is not all to this effect. Charas is but little known in Bombay, Madras, Assam, and Burma; and ganja is but little known in the Punjab. In these five provinces, therefore, but few witnesses institute any comparison; and though there are some who have seen the effects of these drugs in different parts of India, yet the views of the majority of witnesses from these provinces who do institute the comparison must of necessity have but little weight. In the North-Western Provinces, the Central Provinces, and Sind, where both drugs are more or less known, the great majority (six to one) of those who make any distinction in strength between these two forms declare that charas is the stronger. In Bengal, on the other hand, a majority (two to one) of those who discriminate regard ganja as the stronger. Even in these provinces, however, the evidence cannot be accepted with confidence, for it is not usual for ganja and charas to be smoked by the same person. The evidence shows clearly enough that there is no essential difference between charas and ganja, but that the former takes in the Punjab and in parts of the North-Western Provinces the place among intoxicants which is taken by ganja in other parts of India. The only difference in regard to their effects apparent from the evidence is that some witnesses assert one form to be stronger than the other. There are, however, differences of opinion among the witnesses as to which is the stronger. The importance of these differences of opinion perhaps lies mainly in the necessity for explaining them. There are two general reasons why some of the witnesses might erroneously regard charas as weaker than ganja—*viz.*, (*a*) that the effect of each smoke depends on the amount of the drug used, and difference of experience as to this has admittedly led to difference of view regarding the drugs; and (*b*) that the consumers of charas in Bengal are of the higher class, and would naturally speak in favour of their own drug. There are also two reasons why charas may actually compare less favourably with ganja in Bengal than elsewhere—*viz.*, (*a*) that charas undoubtedly deteriorates by keeping, and also appears to be largely adulterated for the market; and (*b*) that the Bengal ganja, being more highly cultivated and more carefully prepared, reaches the market a better article than the ganja of any other province. There is no evidence of any other difference between these two forms of hemp drugs except one of degree; and this difference of degree does not appear to be at all a certainty everywhere. The experiments conducted by Dr. Evans and Mr. Hooper are reported in Vol. III Appendices. They indicate that charas from various sources may contain from 44·5 to 18·45 per cent. of resin soluble in alcohol, while Bengal round ganja affords 21·6 per cent. The physiological value of the alcoholic extracts is not, however, the same in all samples of charas compared with that obtained from Bengal ganja. In only one sample of charas were the effects produced comparable to those produced by a similar dose of the alcoholic extract of the "standard" ganja. The resin extracted from the other samples of charas was much weaker, doses varying

Ganja and charas compared.

from $\frac{1}{100,000}$ to $\frac{1}{5,000}$ part of the body weight being required to produce certain physiological effects, while in three samples of Nepal charas doses equal to $\frac{1}{2,500}$ part of the body weight were inactive. These startling figures seem to indicate not only natural deterioration, but also extensive adulteration of charas.

Flat, round, and chur ganja.

454. The evidence recorded regarding the effect of the three preparations of ganja (round, flat, and chur) shows clearly that if their effects differ (which is doubtful), the difference is not in kind, but only in degree. There is no difference whatever in kind, and the difference in degree is trifling. Round ganja is practically unknown except in Bengal: There the great majority of the witnesses say that there is no difference even of degree between round and flat ganja. Only forty-one witnesses draw any distinction, and these are pretty equally divided. Some, indeed, think that the manner in which the round ganja is rolled retards deterioration; others that the close packing of the flat ganja has the same effect. The truth seems to be that the preference for one or other of these two preparations is purely a matter of habit and varies in different districts, and that there is little real difference between the effects of these preparations. This is borne out by the experiments conducted by Dr. Prain (*vide* his report on the cultivation of ganja submitted to the Bengal Government in 1893) and by those of Mr. Hooper, though these two sets of experiments differ somewhat in result. Dr. Prain gave the average percentages of resin extracts from Bengal round and flat ganja for the seasons 1889 to 1893 as 22·27 and 22·13 respectively. His specimens had been reduced to the state of chur. Mr. Hooper found chur to afford 25·90 per cent. of resin extract compared with 23·8, 22·6, and 21·8 for small flat, large flat, and round ganja respectively.

In respect to chur the evidence is very much divided and uncertain in tone. So far as it goes, it tends to show that Bengal is the only province where chur is regarded as at least as strong as the unbroken ganja. The explanation of this diversity of opinions is simple. Chur is broken ganja; and ganja may be broken either purposely or accidentally. In many parts and by many witnesses chur is regarded as the broken or refuse ganja which becomes separated in the process of preparation or transport, and which " even the poor will not buy." A second class of witnesses know chur as the best parts of the ganja heads, separated carefully from the woody matter or stalks, and therefore stronger, bulk for bulk, than the ordinary article. A third set of witnesses point out that before being smoked ganja must be broken; it must become chur before being used. These insist, therefore, that there is no real difference between chur and other ganja. It may be noted, however, that there seems good ground to believe that chur as packed at present deteriorates more rapidly than the unbroken ganja, and is therefore less popular in at least the more distant markets.

Smoking and drinking or eating.

455. The question as to whether the smoking of hemp is more injurious than drinking or eating the drug is of importance mainly in connection with the difference between ganja or charas and bhang. The form in which the question was put by the Commission raised two comparisons—*viz.*, (*a*) between the smoking and eating or drinking of the same preparation, and (*b*) between smoking one preparation and eating or drinking another. But unfortunately there has been some confusion in the answers, some witnesses having manifestly and others presumably overlooked

this distinction. At the same time it cannot be said that the evidence is practically clear and decided. Many witnesses feel themselves unable to deal with the matter. A few decline to discriminate between the effects of smoking and those of the other modes of consumption. Well over four hundred witnesses, however, institute a clear comparison. Of these there are over a hundred medical men trained more or less thoroughly according to European methods, of whom four-fifths regard smoking as the most injurious form of consumption. There are over forty practitioners trained after native methods, of whom nearly three-fourths hold the same opinion. There are nearly three hundred non-medical witnesses who are similarly divided. These figures show that the decided majority of such witnesses as have given an opinion regard smoking as the most injurious form of consumption, and this is found to be the case both for all classes of witnesses and for all provinces. The majority is least in Bengal, being precisely two to one in each of the two classes of medical, and rather less than that among the non-medical, witnesses who have recognised any difference. It has also to be borne in mind that among the minority there are some who clearly state that though ganja smoking may be less deleterious than drinking or eating ganja, it is more deleterious than drinking bhang. And there are probably others who hold this view, though they have not thought of stating it.

There are some witnesses whose experience is that drinking bhang is a habit which is more likely to go to excess than smoking, because more seductive and more sociable. But there are many, others whose experience is precisely the reverse. There are one or two witnesses who think smoking less harmful than drinking hemp, because the latter form of consumption lends itself in their opinion more readily to deleterious mixtures. But there is a great deal of evidence to a precisely opposite effect. There are also some witnesses who emphasise the injurious effects of the excessive use of bhang on the digestive system. But the preponderance of opinion is that excessive smoking of charas or ganja has still more injurious effects on the system.

Common experience then as indicated in the evidence of all classes of witnesses seems to teach that smoking ganja or charas is more injurious than taking bhang. There seems no reason to decline to accept this view. The following reasons seem to support it: (*a*) there is much less of the resin in what is properly known as bhang than in ganja or charas; (*b*) the products of the destructive distillation of the resin appear to be capable of doing injury, especially if used to excess, and to be carried to the lungs and readily absorbed by the inhalation which is the invariable method of smoking. At the same time no one can read the evidence or observe the facts without realising that the use of bhang, at all events if carried beyond moderation, may also be distinctly injurious.

Admixtures.

456. In considering the effects of hemp drugs, it is necessary not to forget the admixtures used more or less frequently with them. These are discussed more fully in other parts of the report. There are certain of them, such as the spices used to render bhang a more palatable drink and also perhaps less irritating to the digestive system, or the almonds used to emulsify the resinous matter in the bhang, or the tobacco used as the most pleasant vehicle and diluent of charas or ganja when smoked, which need not be discussed here. Their effects are unimportant,

But there are certain admixtures which are taken with the hemp drugs, at least ostensibly, with the express purpose of intensifying their effects. Thus opium is sometimes smoked with ganja. This is probably sheer vice, a dissipated desire to mix intoxicants. Cantharides and nux vomica are sometimes used in bhang. The object of this is apparently to produce aphrodisiac effects. But nux vomica is also perhaps used thus as a tonic. This drug is apparently sometimes smoked, when its effect would be nullified. Arsenic is similarly used in bhang, probably from a belief in its prophylactic and tonic properties. It is also stated to be smoked with charas or ganja. In this form it would be very poisonous, but the evidence seems to show that it is smoked ostentatiously by jogis and fakirs; and probably it is not really inhaled. It is also sometimes stated that aconite is occasionally smoked. All these admixtures, as well as others of a more exceptional and extraordinary character, appear to be rarely used. More common than any of them is dhatura. It is generally the seeds, but occasionally the leaves, that are used. This drug is used by those debauchees or other excessive consumers who either cannot afford sufficient ganja or bhang, or who desire a stronger form of intoxication than either can supply. There is also some little evidence of the occasional use by those who supply the drink of an infusion of dhatura to strengthen bhang, perhaps sometimes without the knowledge of the consumers. There is a good deal of evidence both generally of the use of this drug by excessive consumers, and also in particular cases of the gradual formation of the dhatura habit when ganja or bhang has failed to satisfy. Dhatura is clearly more strongly intoxicant than the hemp drugs, and there can be little doubt that the evidence which represents it as decidedly more injurious may be accepted as in accordance with fact. There is a strong popular prejudice against this drug, and it is not used by moderate smokers at all. It does not seem likely that it would ever replace hemp drugs any more than it now supplements them among moderate consumers, but only among persons who deliberately desire intoxication and are indifferent in their choice of intoxicant. At the same time the use of *Hyoscyamus muticus* (or "Hill bhang of the Western frontier"), already referred to, does indicate the possibility of more general resort to dhatura if ganja were not available. The active principle of this drug is closely allied to that of dhatura in its physiological effects. There are also many witnesses who believe that consumers of the hemp drugs (especially, but not exclusively, excessive consumers) would take to dhatura if they could not obtain the drugs to which they are accustomed, and this opinion is entitled to considerable weight.

Dhatura.

457. Dhatura belongs to the same natural order as hyoscyamus and belladonna. The active principle of dhatura is hyoscyamine with small quantities of atropine and hyoscine: the active principle of belladonna is atropine with some hyoscyamine. These three alkaloids are all closely allied in their physiological action. The action of atropine has been fully studied. It is unnecessary, therefore, to say more of the physiological action of dhatura. The leaves, and in even higher degree the seeds, form a very powerful intoxicant; and the delirium which ensues from the use of the drug is well known. The effects of dhatura as introduced into the system through the stomach have hitherto chiefly received attention, but the effects of smoking have also been observed. There have, however, been hitherto no physiological experiments to ascertain the effects produced by the prolonged inhalation of

dhatura smoke. The Commission requested Dr. D. D. Cunningham to conduct such experiments. His report is contained in Vol. III Appendices. The following extract is of interest: "The subject of experiment, as in the case of that on the effects of the inhalation of the smoke of ganja, was a fair-sized specimen of *Macacus rhesus*. The treatment was initiated on the 1st June and continued until 11th July, so that the experiment lasted for a period of about six weeks. In its conduct the same inhalation apparatus was employed as in the first experiment. At the outset the seeds of dhatura were made use of as the source of smoke; but as they appeared to be undesirably potent, leaves were presently substituted for them, and were persistently employed throughout the rest of the experiment.

"The symptoms attending the treatment were not invariably quite uniform in character. On some occasions indications of a certain amount of cerebral excitement were present for some time; but, as a rule, drowsiness and gradually increasing intoxication manifested themselves from the outset, either alone or associated with symptoms of irritation of the respiratory apparatus as indicated by coughing.

"The animal was killed by means of prolonged administration of chloroform on the morning of the 14th July, and a *post-mortem* examination conducted at once with the following results:—

"The lungs were not adherent to thoracic walls, but were both deeply congested almost everywhere, and especially towards their apices, in which numerous tubercular nodules and small cavities were present. Such phenomena were, of course, very frequent in the lungs of monkeys in confinement, but it remains possible that the general pulmonary congestion may have been partially due to irritation incident on the inhalation of the smoke. The visceral pericardium was almost devoid of fat, and was somewhat thickened and opaque, especially over the region of the right auricle. The omentum and mesentery were also very free from fat. The spleen appeared to be rather anæmic, and was somewhat fibroid in texture. The liver, pancreas, stomach, large and small intestines, and kidneys presented no abnormal appearances.

"On opening the cranium the dura-mater was found to be somewhat thickened, and especially in the neighbourhood of the superior longitudinal sinus very conspicuously congested. In this region, too, the membrane in the occipital region was fixed to the cranial walls by soft, very vascular adhesions. The pia-mater was thickened and so highly injected throughout that the cerebral surface had a generally diffused pink tint. The cerebral substance was everywhere abnormally soft and so friable as to render any immediate removal of the membranes impossible without the occurrence of much destruction of the nervous tissue. Like the surface, although in minor degree, it was of a pinkish tinge owing to abnormal accumulation of blood. Conditions of this kind appeared to be universally diffused throughout the whole of the cerebral centres, the texture of the hemispheres, of the cerebellum, and of the basal ganglia being alike soft, and the evidences of abnormal congestion universally distributed. In spite of this, however, the spinal cord and its membranes were to all appearance perfectly healthy.

"In so far as a single experiment goes, the results in this case would then seem to show that the habitual inhalation of the smoke of dhatura, even when

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only practised for a relatively brief period, is sufficient to establish serious morbid changes in the cerebral nervous centres, and that it therein differs from the habitual inhalation of the smoke of ganja extending over a much more prolonged period. This clearly indicates the necessity of distinguishing between cases in which ganja alone is employed from those in which a mixture of ganja and dhatura is substituted for it, as otherwise certain prejudicial effects which are really due to the use of the latter drug may be erroneously credited to the former one."

Medicinal use.

458. Turning now to the effects of hemp drugs, it seems expedient to take up first their medicinal use. This is not confined to their use as prescribed by physicians, but extends also to their use as popular or domestic remedial agents. Out of a total of 1,193 European and Native witnesses before the Commission, little less than two-thirds refer to the use of hemp drugs by the Vedanti and Yunani schools of native physicians and native doctors generally, while the rest afford no information on the subject or reply in the negative. About one-sixth of the former refer specially to the use of ganja, one-third to bhang, and the remainder state that both forms of the drug are prescribed, several of the witnesses in the North-Western Provinces and Punjab particularising charas as a remedial agent. If the number of witnesses who speak of this use in each province may be taken as approximately indicating its extent, then it would appear that the medicinal use is well known throughout India.

Ancient literature.

459. Before alluding to the use of hemp drugs by native physicians in the present day, the Commission consider that it will perhaps be of interest to give a brief *résumé* of the medicinal properties assigned to hemp by some of the ancient writers. Mr. George A. Grierson, I.C.S., informed the Commission that having searched through all the Sanskrit and Hindi books accessible, he found the first mention of *bhanga* as a medicine in the work of Suçruta, written before the eighth century A.D. *Bhanga* is recommended with a number of other drugs as an antiphlegmatic. In the same work Mr. Grierson points out that *vijaya* is mentioned as a remedy for catarrh accompanied by diarrhœa, and as an ingredient in a prescription for fever arising from an excess of bile and phlegm. In these two passages, however, *vijaya* is probably an equivalent of *haritaki*, the yellow myrobolan, and does not mean hemp; and Dr. Hœrnle informed Mr. Grierson that in the oldest medical works the word *vijaya* is explained by commentators as referring to the yellow myrobolan. The use of bhang between the fifth and twelfth century is frequently mentioned in dictionaries, and the names used would seem to show that its use as an intoxicant was then known. In the Rajanighantu of Narahari Pandita, A.D. 1300, the effects of hemp on man are described as excitant, heating, astringent: it destroys phlegm, expels flatulence, induces costiveness, sharpens the memory, and excites appetite. In the Carngadharasamhita, a medical work, the date of which is unknown, but which must have been compiled during the Muhammadan period of Indian history, bhang is specially mentioned as an excitant. In the Dhurtasamagama, or "Rogues' Congress," A.D. 1500, the following passage occurs: "Ganja, which is soporific and corrects derangements of the humours, which produces a healthy appetite, sharpens the wits, and acts as an aphrodisiac." In the Bhavaprakaça, written about A.D. 1600, bhang is described as being "antiphlegmatic, pungent, astringent, digestive, easy of digestion, and bile-affecting, and increases infatua-

tion, intoxication, the power of the voice, and the digestive faculty." In the Rajarallabha, a materia medica of rather later date, ganja is described as "Indra's food," is acid, produces infatuation, and destroys leprosy. It "creates energy, the mental powers, and internal heat, corrects irregularities of the phlegmatic humour, and is an elixir vitæ."

In the Makhzan-el-Adwiya, hemp seeds are said to be "a compound of opposite qualities, cold and dry in the third degree, *i.e.*, stimulant and sedative, imparting at first a gentle reviving heat, and then a considerable refrigerant effect." The qualities of the plant are stimulant and sedative. "The leaves make a good snuff for deterging the brain; the juice of the leaves applied to the head as a wash removes dandruff and vermin; drops of the juice thrown into the ear allay pain and destroy worms and insects. It checks diarrhœa, is useful in gonorrhœa, restrains the seminal secretions, and is diuretic. The bark has a similar effect. The powder is recommended as an external application to fresh wounds and sores, and for causing granulations; a poultice of the boiled roots and leaves for discussing inflammations and cure of erysipelas, and for allaying neuralgic pains. The dried leaves, bruised and spread on a castor-oil leaf, cure hydrocele and swelled testes." Rumphius in the Herbarium Amboinense, A.D. 1695, states that the Muhammadans in his neighbourhood frequently sought for the male plant from his garden to give to persons afflicted with virulent gonorrhœa or with asthma, and the affection which is popularly called "stitches in the side." He also adds that the powdered leaves check diarrhœa, are stomachic, cure the malady named *pitao*, and moderate excessive secretion of bile. He mentions the use of hemp smoke as an enema in strangulated hernia, and of the leaves as an antidote in poisoning by orpiment.

Modern native practice.

460. The use of hemp drugs by native physicians, as evidenced from replies of witnesses received by the Commission, may be considered under two main heads—(*a*) as specifics in the treatment of diseases, and (*b*) in their general therapeutic applications; while a few uses of the drugs which do not fall within these divisions are also occasionally mentioned. It is hardly necessary to premise that the use of hemp drugs by hakims, etc., is wholly empirical, the drugs being used apparently haphazard for the most diverse diseases. It is interesting, however, to note that while the drugs appear now to be frequently used for precisely the same purposes and in the same manner as was recommended centuries ago, many uses of these drugs by native doctors are in accord with their application in modern European therapeutics. *Cannabis indica* must be looked upon as one of the most important drugs of Indian Materia Medica.

In connection with the pharmacy of the drug, the preparations of the hemp plant used by native doctors are bhang, ganja, and sometimes charas: the seeds appear to be very rarely used. Bhang is generally prescribed as a cold infusion prepared from the powdered and well-triturated leaves, or as a confection or "moduks," especially in the treatment of nervous debility: into all these preparations a large number of other ingredients usually enter. The admixture of saccharine matter with bhang is popularly supposed to render it more potent as an intoxicant. Bhang is also used as a local application in the form of poultice, and sometimes the finely-powdered leaves are used as a snuff. When ganja and charas are prescribed for inhalation, the drugs are smoked mixed with tobacco;

when ganja is used for local fumigation, the smoke from the unmixed drug is employed. These two drugs appear to be rarely used for internal administration. Occasionally an oil prepared with ganja and other ingredients is used as a rubefacient. The expressed oil from the seeds is also used for a similar purpose.

Treatment of disease.

461. In discussing the diseases treated, we may take first diseases of the nervous system. Witnesses refer to the use of the drugs in the treatment of "brain fever," cramps, convulsions of children, headache, hysteria, neuralgia, sciatica, and tetanus. In certain of these diseases, *e.g.*, convulsions of children, neuralgia, and tetanus, the use of hemp preparations has also been advocated by European practitioners. The late Sir W. B. O'Shaughnessy, of Calcutta, appears to have been the first to use hemp resin in tetanus. He found that in many cases it effectually arrested the progress of the disease, but in the hands of others equally good results were not always obtained. O 'Shaughnessy explains this by the fact that the use of hemp is so universal among the lower classes, that it is only in those patients who are not habituated to it that beneficial effects are likely to ensue when the drug is administered medicinally. The treatment of tetanus by the inhalation of ganja smoke has also been recommended. In the class of specific infectious diseases, hemp drugs are stated to be used in hydrophobia, ague, remittent fever, cholera," to relieve burning symptoms in phthisis," dysentery, erysipelas, and gonorrhœa. O 'Shaughnessy more than 50 years ago used hemp resin with more or less success in hydrophobia and cholera. In the treatment of dysentery the resin has been found of much value by many European doctors, and excellent results have been obtained with it. In addition to the medicinal use of the drug for the treatment of cholera during epidemics, hemp drugs appear occasionally to be used as prophylactics, and for a similar purpose the use of the drugs is recommended in malarial areas to counteract the effects of "bad air and water." In both cases hemp drugs probably act as indirect prophylactics, stimulating the nervous system and allaying depression, thus serving much the same purpose as the popular use of alcoholic beverages by the lower classes in European countries during the prevalence of epidemics. But, on the other hand, it must be remembered that when ganja is smoked as a prophylactic, it is always mixed with tobacco, and yields members of the aromatic series of hydrocarbons, the lower members of which are known to possess both *antiseptic* and *antipyretic* powers. In the treatment of diseases of the respiratory organs, hemp drugs are stated to be used in hay-fever, asthma, bronchitis, and coughs, inhalation of ganja smoke being the usual mode of exhibiting the drug. Pounded bhang leaves are stated to be sometimes used as a snuff in catarrh and "diseases of the nose and head." In several diseases of the organs of digestion hemp drugs are prescribed, flatulence, diarrhœa, dyspepsia, piles, and prolapsus ani being the chief. Bhang has also been prescribed to check salivation. In diseases of the urinary organs hemp preparations are used in diabetes, impotency, stricture, spermatorrhœa, hydrocele, incontinence of urine, and swellings of the testicles. In orchitis a warm bhang poultice applied on a warm fig leaf is recommended to be bandaged over the testicles, and in hydrocele a similar poultice is spread on a castor-oil leaf. In impotency and nervous debility the drug is doubtless used on account of its supposed aphrodisiac power. Hemp drugs are also stated to be prescribed in diseases of the heart, brain, spleen, in rheumatism, gout, and delirium tremens, and they are also used in the treatment of scabies, guinea-worm, and boils. An oil prepared

from bhang and other ingredients is prescribed in white leprosy, and bhang smoking is stated to be used against the poisons of fish and scorpions.

Therapeutics.

462. In connection with the therapeutics of hemp drugs, one of the commonest uses is for the relief of pain, the drugs being used either as local or general anodynes. Thus bhang poultices are frequently mentioned as soothing local applications to painful parts; and poultices are used for inflamed piles and over the seat of pain in liver and bowel diseases, and to check inflammation and erysipelas. Fumigation with the smoke from burning ganja or bhang is also used as a local sedative in piles. A small fragment of charas is placed in a carious tooth to relieve toothache. And the use of the drugs is also referred to for the relief of protracted labour pains, dysmenorrhœa, pain in the stomach, cramps, and neuralgia. One witness states that hemp drugs are used as a substitute for opium. In cases of circumcision the drugs are used as anæsthetics, and a witness mentions that native doctors on rare occasions substitute ganja for chloroform in operations. The tincture of *Cannabis* has been used as a local anæsthetic in extracting teeth (British Journal of Dental Science).

Pulmonary sedative.
Asthma and bronchitis.

463. In asthma and bronchitis inhalation of ganja smoke appears to be very frequently prescribed; while, on the other hand, there is evidence which tends to indicate that both affections may be induced by charas or ganja smoking indulged in as a habit. The inhalation of ganja smoke may very possibly first act as a pulmonary sedative, diminishing the secretion of mucus, and after long continuance as an irritant increasing mucus secretion, and giving rise to a chronic bronchitis. In considering the therapeutic action of gânja and charas smoke in these affections, it must be remembered that the drugs are as a rule smoked admixed with tobacco from a *chillum*, and the smoke inhaled into the lungs in a similar manner as sometimes in cigarette smoking. In ganja smoking, however, the inspiratory act is far greater and more prolonged, a larger volume of smoke entering the lungs than in cigarette smoking. In smoking ordinary tobacco the composition of the smoke will vary according to the amount of air admitted during combustion, oxidation being thus more perfect in cigar than in pipe smoking. In smoking tobacco from a pipe, pyridine is one of the chief aromatic bases produced. In smoking a mixture of ganja or charas and tobacco, aromatic hydrocarbons must also be formed: pyridine and others from the tobacco, and aromatic hydrocarbons also from the hemp drug, though at present we are not in a position to indicate the precise nature of the hydrocarbons afforded by its dry distillation. The base pyridine which is found in pipe smoke possesses the power, according to Germain Sée (Comptes Rend. Ac. Science, 1886), of diminishing the reflex activity of the respiratory centre, and may thus act as a pulmonary sedative; and, according to Lauder Brunton, the inhalation of the vapour of pyridine has been used in asthma with beneficial effect. Tobacco smoking has also been recommended in the treatment of asthma. Irrespective, therefore, of the products afforded by the hemp drugs, the tobacco smoke may be thus of value in both bronchitis and asthma. But long-continued smoking, whether of ganja or of any other substance, doubtless results in the deposition of finely divided carbonaceous matter in the lung tissues, and the presence of other irritating substances in the smoke ultimately causes local irritation of the

bronchial mucous membrane, leading to increased secretion, and resulting in the condition which is described as chronic bronchitis in ganja smokers. Whether true asthma can be induced by hemp drug smoking, the Commission consider open to much doubt. It appears to them highly probable that the drugs are smoked in the first instance for the relief of that disease. On the other hand, it is well known that frequent asthmatic seizures result in emphysema of the lungs and attendant bronchitis; and possibly most cases of hemp drug bronchitis are associated with emphysema, induced partly by the strain mechanically thrown on the lungs in smoking, and partly as a result of the chronic bronchitis. So that in considering the œtiology of associated asthma and bronchitis in ganja smokers, they are inclined to the view that in the vast majority of cases the drug is not the cause. In many of the statements of witnesses regarding alleged experience there is no satisfactory evidence of even the co-existence of these diseases with the habit of using hemp drugs. And when that co-existence is reasonably established, there is often no good ground for accepting the relation of cause and effect. The drugs may have been used in many cases owing to the popular notion that they alleviate these diseases. At the same time there is some evidence that the drugs may cause bronchitis or bronchial catarrh as above described. There is no satisfactory evidence that they ever cause asthma.

Diuretic action.

464. The diuretic action of bhang is mentioned in connection with the treatment of gonorrhœa. The diuresis which is popularly supposed to be induced by administration of an infusion of bhang is in accord with Dr. Russell's experiments (Bengal witness No. 105) which are appended to his paper. In these experiments Dr. Russell found that the leaves both from mature and immature plants, whether fresh or dry, and used as a drink or smoked with tobacco, produced diuresis; but Dr. Russell does not appear to have noticed diuresis following the smoking of ganja. These experiments were made in 1883. Subsequently some supplementary experiments were conducted by Dr. Russell, which are embodied in Dr. Prain's Report on the "Cultivation and use of ganja." In the précis of his experiments, Dr. Russell states: "The only marked effect was diuresis from drinking infusions of fresh (not dried) leaves and stems." In his oral examination before the Commission, Dr. Russell repeated that the dried leaves had no marked diuretic effect. The diuresis was the most marked effect of the fresh leaves. The difference in the action of the fresh and dry leaves is no doubt due, as suggested by Dr. Russell, to the escape of a volatile principle, this volatile principle being, no doubt, a volatile oil. Many volatile oils are well known to possess diuretic properties. It is to the presence of the volatile oil of juniper that that well-known domestic diuretic gin owes its properties. The higher the temperature at which the leaves are dried, the smaller would be the amount of retained essential oil; but the practical point is the desirableness of using only fresh leaves when the diuretic effect of the drug is required. The flowering tops are known to contain a volatile oil, and the diuresis which follows the exhibition of the extract which is prepared from ganja has been specially noted by Prof. C. H. Wood. The volatile oil present in the flowers is probably a mixture of low and high boiling point oils; in preparing the extract the low boiling point oil escapes, the peculiar odour of the finished extract being due to the retention more or less of the high boiling point fraction. Some witnesses refer to the febrifuge properties of hemp drugs; and it is stated that bhang used as a drink cuts

short the cold stage in fever. There appears to be but little doubt that when bhang is used by natives in fever, the benefit accrues on account of its diuretic action, and not because it possesses any real febrifuge properties. It is not known to possess the latter.

Tonic and other effects.

465. The tonic, digestive, stimulant, antispasmodic, astringent, and alterative effects of the drugs are mentioned by some witnesses. It is probably on account of the supposed hæmostatic effect that powdered charas is used as an application to cuts to check bleeding and induce healing, and possibly the use of the drugs in menorrhagia is based on similar reasoning. In this connection, however, it is interesting to note that Dr. R. L. Dey, a medical officer of the Eastern Bengal State Railway, in 1866 reported the successful treatment of a number of cases of obstinate menorrhagia with tincture of Indian hemp and liquid extract of ergot, although he could obtain no benefit from the use of ergot administered with sulphuric and gallic acids and other hæmostatics. The use of the drug as an ecbolic is also mentioned. According to Stillé and Maisch (National Dispensatory), there is evidence to show that *Cannabis* appears capable, directly or indirectly, of causing uterine contraction, as in many cases of uterine hæmorrhage, and it is also said to cause contraction in the pregnant uterus with as much energy as ergot, but with less persistent action. Some witnesses refer to the purgative action; it is quite possible that a *chillum* of ganja may act in the same way as the morning pipe does with many Europeans.

Aphrodisiac action.

466. The use of the drug in cases of impotency is, no doubt, based on its supposed aphrodisiac effects. The experiments of Prof. Wood indicate that the drug does not possess any aphrodisiac power; and Lauder Brunton remarks ("Text-book of Pharmacy, Therapeutics, and Pharmacology"): "*Cannabis indica* has been regarded as an aphrodisiac, but the trials of it made in this country seem to show that it does not, itself at least, have any such action, and merely induces a condition of partial delirium in which Easterns may possibly have visions of a sexual nature, and indeed they try to give a sexual direction to the mental disturbance which the *Cannabis* produces by mixing with it musk, ambergris, or cantharides." O'Shaughnessy, on the other hand, speaks of the drug acting on the "generative apparatus," and in experiments, which he tried on some of his pupils, he states that, "with scarcely any exception, great aphrodisia was experienced" from administration of the extract. Physiologically the active principle of hemp drugs has, so far as is known, no aphrodisiac power whatever; and, as a matter of fact, they are used by ascetics in this country with the ostensible object of destroying sexual appetite. But taken as a stimulant to assist in the execution of a specific purpose, its indirect effect is perfectly intelligible. Like alcohol it gives strength and free course to the predominant desires of the animal nature. This effect will be considered more fully later. Meanwhile it is enough to say that the alleged aphrodisiac action seems to be merely the indirect effect of the drug as a stimulant. This effect explains the use of these drugs in the houses of prostitutes, regarding which there is a good deal of evidence, just as alcohol in one form or another is used in similar houses in Europe.

The following are some of the minor cases to which ganja is applied. Occasionally the drug is burnt as a disinfectant and used in lieu of carbolic acid. It is also applied to sores for healing, and ganja ash is used to stop ulceration. By

singers the drugs are used to clear the throat; and they are also alleged to possess vermicide properties.

Cattle disease.

467. Regarding the use of hemp drugs in the treatment of cattle-disease, out of a total of 1,193 witnesses, one-half give no information; and of the rest rather over one-half speak to the use of bhang alone, while the remainder speak generally of the use of both ganja and bhang. A few witnesses speak only of the use of ganja, but that is mainly where bhang is not available. This use of the drugs is in evidence in all provinces, though naturally to a less extent in Bombay and Madras than elsewhere, and least of all in Burma. Among the diseases for which hemp drugs are prescribed in native veterinary practice for cattle, horses, sheep, and occasionally elephants may be mentioned colic, bowel-complaints, diarrhœa, sprains, constipation, cow-pox, foot-and-mouth diseases, hoof disease, pneumonia, affections of the throat, colds and coughs, quinsy, and rinderpest. Ganja is used to extract worms in foot-sore diseases of cattle and to remove intestinal worms, and is also burnt to disinfect sheepfolds. A very common use of the drugs is as a tonic to produce condition, to make oxen fleet of foot, to relieve fatigue, and to give staying power. Bhang is sometimes used to increase the flow of milk in cows, and also to stupefy them when they refuse to be milked. The drug is occasionally given to mares shortly before being covered, and it is also used after delivery. Bhang mixed with salt is given to cattle as preventive against purging, to which they are generally subject from feeding on the young shoots of grass sprouting during the early part of the monsoon. Hemp drugs when used for cattle disease are usually administered raw, but always admixed with other ingredients, spices, salt, or gur. Occasionally bhang is first cooked in a metal pot, then mixed with gur, when animals eat it readily, or it is forced down the throat mixed with salt.

The use of hemp drugs for the treatment of cattle-diseases appears to be nearly equally prevalent throughout Northern India. Mr. Driberg, Excise Commissioner, Assam, in his oral evidence before the Commission said: "I have no feeling that the Circular No. 28 of 1882 was necessary. I think it was issued on insufficient information. I never push it forward. I have never seen the stuff used for cattle; nor have I heard of its being used, except when the use is thus pleaded in excuse." The Commission, while recognizing the necessity of the popular use of the hemp drugs in veterinary practice, do not find in the evidence any reason for thinking that the practice is more common in Assam than elsewhere in the north of India.

The Commission have said all that it is necessary to say regarding the strictly medicinal use of hemp drugs in the alleviation of human suffering and disease. This is to be carefully distinguished from the popular use of the drugs by the ordinary consumer, which it is now proposed to discuss. It is true that there are points where the two uses can hardly be separated by a hard-and-fast line. The medicinal use seems to merge sometimes into the popular use, where the drugs are used, ostensibly at least, for purposes akin to medical. The popular impression of the drugs also must be influenced by their uses in medicine.

Is moderate use beneficial?

468. It is natural that the people generally should associate certain beneficial results with the use of hemp drugs, and that this recognition should tend to encourage, and should be urged in justification of, their moderate use. At the same time it is necessary to

consider the popular use and its effects apart from the medicinal use. A drug may be a useful medicine, but a bad thing to allow into the market freely for general consumption. The evidence regarding the popular use has now to be considered. There are only about fifty witnesses who assert that no benefit whatever can be derived by consumers from the moderate use of any form of these drugs. The vast majority assert that in some one or other of their forms they may produce at least temporarily beneficial effects. Many even of those who regard the use of the drugs as on the whole baneful admit such temporary benefits. It is to be noted, however, that, with the very rarest exceptions, the evidence points to the use of the drugs by males only. Women would therefore appear either not to require or to be denied the benefits ascribed to the drugs.

Food accessory or digestive.

469. Among the beneficial effects attributed to the drugs is their effect as a food accessory or digestive. This effect is more generally attributed to bhang than to the other two forms. But there are a large number of witnesses who attribute it also to the smoking of ganja. The "cooling and refreshing" cup of bhang taken by the well-to-do, especially in the hot weather, to stimulate their energies and to create an appetite for food is frequently in evidence. There would seem to be a very general use of bhang in moderation as a stimulant and digestive by the middle classes, especially in advancing years. Some of the most intelligent and enterprising classes of the community are among those who thus use bhang. This use is generally spoken of without any marked condemnation, and often even with approval; for it is the practice of the respectable classes. But after all there seems quite equally good ground for believing that the *chillum* of ganja taken by the labouring man after his food with the object of allaying weariness and assisting digestion is no more harmful; and there are many witnesses whose evidence is in this sense. The use of bhang in the one case is sometimes compared to the glass of wine taken at meals by a moderate consumer of alcohol, and the use of ganja in the other case to the labouring man's glass of beer or even to his pipe of tobacco. It is possible also that the effects of hemp drugs in this respect may be to a certain extent comparable with those of tea. In connection with the most recent experiments on the subject, the action of tea is thus described by Dr. Edward Smith: "It increases the assimilation of food both of the flesh and heat forming kind, and with abundance of food must promote nutrition, whilst in the absence of sufficient food it increases the waste of the body." If there is anything in this comparison, Dr. Smith's remarks regarding tea may throw some light on the statements frequently found in the evidence regarding the necessity for sufficient or nourishing food to prevent injury to the constitution from the prolonged use of hemp drugs.

To give staying-power.

470. The use of these drugs to give staying-power under severe exertion or exposure or to alleviate fatigue is very largely in evidence. Here it is ganja especially which is credited with these beneficial effects. For ganja is far more extensively used than bhang by the labouring classes. The latter is mainly used by persons like the Chaubes of Mathra, who are very frequently referred to, and professional wrestlers. Gymnasts, wrestlers and musicians, palki-bearers and porters, divers and postal runners, are examples of the classes who use the hemp drugs on occasions of especially severe exertion. Fishermen and boatmen, *singhara* cultivators

working in tanks, dhobis and night watchmen, mendicants and pilgrims, are named as among those who use them under severe exposure. All classes of labourers, especially such as blacksmiths, miners, and coolies, are said more or less generally to use the drugs as a rule in moderation to alleviate fatigue. In this connection a reference to Dr. Cunningham's experiment described in Vol. III Appendices is interesting.

471. There is also a large body of evidence showing that hemp drugs, both as smoked and as drunk, are used as a febrifuge or preventive of the diseases common in malarious tracts or arising from the use of bad water. This is the justification alleged for the habitual use of these drugs in certain localities. Here, of course, the experience of the witnesses is more limited; but the evidence is very considerable. Labourers in malarious tracts and cultivators of wet and marshy lands, jungle tribes, and those who have to work or reside in jungle tracts, are among those who are said to use the drugs for these purposes. It is impossible also to shut the eyes to the evidence which often comes up unexpectedly, showing that respectable and intelligent people going on duty to such tracts, and sepoys sent on foreign service or garrisoning comparatively unhealthy districts, often take to these drugs for these purposes.

Febrifuge.

472. There are a few other effects of a beneficial character which are referred to by certain witnesses. They are, however, of a less important character and less generally contemplated than those which have been already considered. Thus the drugs are said to be used sometimes to prevent insomnia and to relieve anxiety, as the consumer of alcohol sometimes takes a "night cap before going to bed" or a glass of wine when he is of heavy heart. The drugs are said to be cheering in their effects, and to be prized by many on this account. An interesting illustration of this may perhaps be found in the popular belief existing in many parts that these drugs protect against cholera and other epidemic diseases. One very intelligent witness, who has seen much of this use, explains it as due to the stimulating and inspiriting nature of the drugs. The drugs are said to be used to produce concentration of attention not only by fakirs, but also by such tradesmen as jewellers doing very fine work. They are said to be used by the poor and on occasion by others to alleviate hunger when sufficient food is not obtainable. The alleged occasional use in this way by sepoys, who for any reason cannot devote a sufficient amount of their pay to procuring food, is interesting. One witness (Mr. E. J. Ebden, Collector of Ahmednagar) thus refers to this: "I am told on good authority that native soldiers who have gambled away their pay employ the ganja pipe as a cheap substitute for food until in funds again." Want of money from other causes might lead to the same practice; and the evidence shows that the practice is not confined to sepoys. It is especially found among wandering mendicants, and no doubt exists among other classes. The practice cannot result in permanent advantage, but the temporary relief is not to be overlooked.

Other beneficial effects.

473. There are a few witnesses who stigmatize all such allegations of beneficial results as mere excuses made for a vicious indulgence. As some opium consumers attribute all manner of good effects to opium, liquor drinkers to alcohol, and tobacco smokers to tobacco, so do consumers of hemp attribute these beneficial effects to their

Contrary evidence.

favourite drug. It is, no doubt, true that there is a tendency to find excuse for an unnecessary indulgence. But the medicinal uses of these drugs lend at least some measure of support to the popular belief among consumers that some beneficial effects do follow from the moderate use. There are one or two witnesses who assert that the use of these drugs, far from being a protection against malaria, makes the consumer more liable to its influence. This may be true of the excessive use, which may injure the constitution and predispose to noxious influences. There is, however, no sufficient ground for believing that it is true of the moderate use. Other witnesses assert that the effect in alleviating fatigue is merely temporary, and results in the end in greater exhaustion. So far as the moderate use is concerned, this view would appear to be mainly theoretical; for, as has been already pointed out, there are very few witnesses who even profess to have any experience of evil effects resulting from moderate consumption. There are also a number of witnesses who attribute these good effects to bhang only, while some limit them to the occasional use of the drugs. These statements may perhaps be taken for practical purposes together. The occasional use of ganja or charas must be rare compared with the occasional use of bhang; for the smoking habit is more difficult to acquire, and there are therefore few who can with comfort indulge in it only occasionally.

The truth seems to be that while, no doubt, these drugs are more commonly consumed merely as stimulants than from any clearly defined idea of their beneficial results, yet they are popularly believed to have (if moderately used) some such beneficial results as have been above described. Moderate consumers believe this, and would feel a sense of deprivation if they were unable to obtain what they regard as a beneficial stimulant. This deprivation would be more felt among the poorer classes than among the wealthier, whose tastes lead them to more expensive luxuries. It is the poorer people and the labouring classes who as a rule use these drugs for the purposes indicated. They are admittedly as a rule moderate consumers. They do not seem to exceed in the use of hemp so frequently as in the use of liquor. Those who seem, according to the statements of many witnesses, really to derive no benefit but only harm from the use of these drugs are those who, leading sedentary or idle lives, take the drugs from a merely vicious desire of nervous excitement, and have a strong tendency to excess.

Is moderate use harmless?

474. The fact that certain beneficial effects result from the moderate use under certain circumstances is not, however, necessarily inconsistent with the view that even the moderate use is on the whole injurious. Witnesses were therefore invited to consider separately the question if the moderate use of these drugs is on the whole harmless. About eight hundred and fifty witnesses (*i.e.*, considerably more than two-thirds of the whole) record their opinion. Of these, over sixty declare that the moderate use cannot be regarded as harmless simply on the ground that it is apt to develop into excess. The remainder (about eight hundred) answer the question clearly in the affirmative or negative for each of the forms of the drugs with which they are acquainted. Nearly three hundred witnesses deal with charas, and their opinion is as four to three against that drug. It is in the Punjab, Sind, and the North-Western Provinces that opinion is strongest in this direction. It is in these provinces that charas is best known, and elsewhere

Charas.

the drug is probably weaker from deterioration. So that opinion in these provinces is probably entitled to more weight than elsewhere. On the whole, then, there is apparently a more unfavourable opinion of charas than of the other forms of hemp drugs.

475. In regard to ganja, opinion is about seven to five in favour of the moderate use being harmless. In every province, except the North-Western Provinces and Sind, the majority take this view. In Sind the drug is known to but few witnesses, and a large proportion of these few fail to discriminate between the moderate and excessive use. In the North-Western Provinces the drug is well known, and the witnesses are divided as three to two against the drug—almost, indeed, in the same ratio as in regard to charas. Here, however, a careful examination of the papers shows that at least one-fifth of these witnesses against ganja have not discriminated between the moderate and excessive use. In other provinces the majority believe the moderate use of ganja to be harmless. In Bengal, where the drug is best known and most carefully cultivated, this majority is about two to one.

Ganja.

476. Bhang is regarded with more general favour than other preparations of hemp. The witnesses who declare it harmless are nearly as three to one as compared with those who think otherwise. This majority is found in pretty nearly this ratio in all provinces. This may, therefore, be accepted as the prevailing opinion.

Bhang.

477. There is a large number of witnesses who either do not know enough, or do not feel strongly enough, regarding the effects to say anything about them. There is also a large proportion of the other witnesses who declare the moderate use of the drugs to be harmless. Finally, there is manifestly a tendency in many of the witnesses against the drug to base their unfavourable opinion on their experience of excessive consumption. In view of all this, there can be little doubt that there is a very large amount of moderate consumption of all these drugs, the evil effects of which are inappreciable, even if this moderate consumption is not quite harmless. There is a good deal of justification of the failure of many witnesses to discriminate between moderate and excessive consumption. That which is moderate and harmless to one man may be too much for another. And the moderate habit may undoubtedly develop into excess in some cases where excess might not have been looked for. It is so with all intoxicants; but moderation and excess ought to be distinguished. And on the whole the weight of evidence is to the effect that moderation in the use of hemp drugs is not injurious.

Silent witnesses.

478. The great majority of the witnesses are of opinion that the habit of consuming these drugs is easily formed. As a rule these witnesses speak from experience of consumption among the upper and middle classes. There is no doubt that there are some difficulties in the way of a lad learning the habit apart from the deterrent opinion (where it exists) of parents or of society. It is necessary to know how to prepare the drug, though most of the methods of preparation when learned are simple enough. This fact, together with the force of example, explains the very general statement that the habit is acquired in the com-

Formation of the habit.

pany of smokers. The first effects produced in the novice by the drug, especially if smoked, are also far from pleasant, and must tend to make the habit somewhat difficult to acquire. The first effects of bhang need not be unpleasant if the consumer is careful to begin with very small doses. But it is otherwise with hemp smoking. To produce any effect, the smoke has to be taken into the lungs by strong inhalation. The effect of this is often unpleasant and distressing, especially to those who are not accustomed to smoke tobacco in this particular way. It is doubtful, however, whether these first effects are ever more deterrent in character than those which European lads experience on their first acquaintance with tobacco, and it cannot be said that they present any real difficulty in the way of those who from any motive desire to consume these drugs. Once these initial difficulties are past, the habit is easily formed. As in the case of every other intoxicant, consumption tends to become habitual.

Strength of habit.

479. The pretty general belief is that the habit is not easily broken off when once formed; but the difficulty is not believed to be so great as in the case of either alcohol or opium. It is apparently greater than in the case of tobacco. The experience of our jails seems clearly to confirm the general opinion that the opium habit takes a much stronger hold than the ganja habit, and that no injurious physical effects follow the compulsory cessation of the latter. But even the moderate habitual consumer looks for the effect which he associates with the drug, and finds it a considerable effort to give up the habit—an effort which demands considerable strength of mind in cases where the necessity for abandoning the habit may have arisen. In case of habitual excess the difficulty is greatly increased. The weakness of mind at once displayed and intensified by this excess renders it sometimes impossible to give up the habit without restraint. But even in cases of excessive consumption, the difficulty appears to be less with ganja than with alcohol or opium.

Moderation and excess.

480. It is a general belief that there is a tendency for the moderate habit to develop into the excessive. This belief is based on the general view that such a tendency must exist more or less in the case of all intoxicants, on the fact that as the system becomes accustomed to the use of a drug a larger dose appears to be required to produce the same effect, and on the undoubted fact that there are some excessive consumers who had begun and continued for some time the use of these drugs in moderation. It is, however, a matter of ordinary experience that in the case of a moderate consumer of alcohol, for example, who is in normal health, the effect which he wishes to produce by his moderate use is regularly produced by the same dose without any necessity for increasing it. And the fact that there is comparatively so little of excess in the use of hemp drugs, and that so many consumers, especially of bhang among the middle classes and of ganja among working people, retain their moderate habit and regularly have their accustomed dose twice or thrice a day, seems to show that this tendency is certainly not stronger in their case. While individual differences in strength of mind must always lead to difference in results, and hereditary mental instability is in certain cases a factor which must not be overlooked, the fact seems generally to be that excess is found (as in the case of alcohol) to be mainly confined to idle and dissipated persons, and to be often due to the force of example and foolish emulation in bad company. The man who takes these drugs regularly as a food

accessory, or as a stimulant in hard work, does not seem to be prone to excess. Apparently also the tendency is much less towards that occasional excess which in the case of alcohol so frequently becomes habitual. The working man, for example, does not seem to have the same temptation to a debauch with ganja as with alcohol.

Hereditary tendency.

481. Another question of some interest that has arisen in connection with the hemp drug habit, whether moderate or excessive, is the question whether it is hereditary. No evidence of the smallest value is forthcoming to show that it is. There are, no doubt, witnesses who state this as their belief; but the basis of that belief is merely the undoubted fact that in many cases the sons of ganja smokers also themselves smoke ganja. This fact is sufficiently explained in the first instance by the universal tendency of sons to imitate their fathers. It has also to be borne in mind that it is an acknowledged fact that the neurotic diathesis which is hereditary frequently exhibits itself in a tendency to indulge in stimulants. The weakness which may have led the father to indulgence in ganja may be inherited by the son, and produce in him the same tendency to use this drug; but there is no such evidence as would justify the opinion that the indulgence is itself hereditary.

Physiological action of the drugs.

482. In proceeding to deal more directly with the effects induced by the moderate use of the drugs, the Commission consider it desirable to preface the general analysis of information obtained from ordinary witnesses by a *résumé* of the known physiological action of the drugs as determined by competent observers. The earliest experiments of which we possess any record were instituted on animals by Sir William B. O'Shaughnessy. Ten grains of Nepalese charas were given to a middling sized dog; in half an hour the dog was stupid and sleepy, dozing at intervals, starting up, wagging his tail as if extremely contented, and ate food greedily. On being called to, he staggered to and fro, and his face assumed a look of utter and helpless drunkenness. These symptoms lasted two hours and then gradually passed away, and in six hours the dog was perfectly well and lively. In another experiment twenty grains of alcoholic extract of ganja were given to a very small dog. In fifteen minutes he was intoxicated: in half an hour he had great difficulty of movement: in an hour he had lost all power over the hinder extremities, which were rather stiff, but flexible: sensibility did not seem to be impaired, and the circulation was natural. He readily acknowledged calls by an attempt to rise up. In four hours he was quite well. O'Shaughnessy conducted experiments on carnivorous as well as graminivorous animals, and found that the former invariably and speedily exhibited the intoxicating influence of the drug, while the latter experienced but trivial effects from any dose administered. As a result of several experiments on pupils at the Medical College, Calcutta, O'Shaughnessy observes: "The result of several trials was that in as small doses as $\frac{1}{4}$ of a grain the pulse was increased in fulness and frequency; the surface of the body glowed; the appetite became extraordinary; vivid ideas crowded the brain; unusual loquacity occurred; and, with scarcely any exception, great aphrodisia was experienced." Lauder Brunton states: "Its chief effect is on the brain, and is of a twofold nature; it excites a form of delirium and hallucinations, usually followed by deep sleep. Small doses give rise to delirium with hallucinations generally of a gay character causing much merriment, accompanied by a great inclination to mus-

cular movement. The nature of the hallucinations depends greatly on the character of the individual, and people seem to be able to determine their nature as in the case of opium. The dreams produced by Indian hemp in inhabitants of Eastern countries are usually of a sexual character, but when taken by more civilized people of Western nations they are not sexual, and are often of a disagreeable nature. During this stage of hallucination the person may conduct himself rationally, and answer clearly any question put to him. The drug produces in some persons a curious loss of sense of space and time. This stage is generally followed by deep sleep. The sensory nerves are benumbed, and there is frequent tingling and partial anæsthesia. The pupil is dilated. Respiration may be either quickened or slowed. The action on the pulse is very uncertain. Usually it is at first quickened, then slowed, sometimes *vice versâ*. The temperature rises or sinks according as the drug produces muscular movement or sleep. The urine is increased. The processes of digestion are less altered by *Cannabis indica* than by opium, and the after effects of opium (nausea, headache, etc.) are not produced." Dr. Russell (Bengal witness No. 105), in his note furnished to Dr. Prain, gives the following effects of "doses pushed to produce a decided effect": "Mental effects appear in from three to five minutes; exhilaration and excitement of a pleasing nature: the subject talkative and merry; laughs and gesticulates; plays on imaginary musical instruments and sings; converses with imaginary persons; illusions and delusions, usually of a pleasing nature; objective of these very responsive to external impressions and suggestions; rarely quarrelsome or combative. Then ensues a condition of repose and quiet contemplation with fixed stare and immobile pupil. Then drowsiness and restless sleep in from two to three hours, lasting several hours: on waking, dulness, heaviness, profound depression, and irritability lasting for many hours. Physical effects in stage of exhilaration—conjunctiva reddened, pupil immobile; venous turgescence of face and head; respiration increased in frequency by three or four per minute; temperature raised two degrees or more; skin dry; a general condition of febrile excitement, vascular tension, increased pulse, quickened by ten beats or more per minute, hard, jerky, irregular. At later stage of reaction and drowsiness, skin cold, dry, pale; temperature subnormal (97° Fahr.); pulse slow, soft, compressible, very irregular; respirations lessened in frequency and shallow; copious *diuresis*." These experiments refer to the drugs bhang and ganja smoked and drunk as an infusion (*vide* the details of certain of Dr. Russell's experiments instituted in 1883 and appended to his evidence). Dr. Prain in his report on the cultivation and use of ganja refers to some experiments made on cats with alcoholic extracts of ganja, and Dr. Evans, Officiating Chemical Examiner, Bengal, at the suggestion of the Commission, also instituted a series of experiments on cats. Both these observers refer to the idiosyncrasy exhibited as to effects in the animals under experiment. Dr. Evans remarks "that some cats under the influence of the drug were prone to sleep, and others to the development of the phenomena ascribed to the disturbance of the sensory-motor apparatus; that the same dose relative to the body weight would in some animals induce disturbance of the sensory-motor mechanism, and in others a varying degree of narcotism. Apart, however, from individual idiosyncrasy, the quantity of the dose was found to play an important part also in determining the character of the effects produced by the drug. For in certain animals who after certain doses had been recognized as prone to develop sensory-motor disturbance without marked sleep or narcotism, an increased

dose, if sufficiently large, could be relied on to produce sleep deep enough to mask or prevent the development of sensory-motor disturbance, with the exception of the rocking movements." Dr. Bovill (Bengal witness No. 109) describes the effects of smoking ganja in cigarettes, and Assistant Surgeon J. E. Bocarro (Sind witness No. 20) gives notes in which he compares the effects of drinking bhang and smoking ganja and charas.

Dr. Cunningham's experiment on ganja inhalation.

483. The following interesting account of an experiment on the effects of the systematic inhalation of the smoke of ganja conducted by Dr. D. D. Cunningham at the request of the Commission is extracted from his report (Vol. III Appendices). The growth of the habit, the uneasiness arising from privation, the symptoms of the intoxication, especially the appearance of optical delusions, the absence of appreciable indication of cerebral excitement, and the *post-mortem* appearances, are most interesting features of the report. So far as one experiment can be accepted as establishing anything, and subject also to the more careful histological enquiry to be conducted hereafter, this experiment gives additional evidence of the absence of morbid changes in the brain and of tissue changes generally under the action of hemp drugs even when used in excess. At the same time the general features of the experiment as indicated above are on the whole comparable with the effects of the hemp drugs on the human consumer as established in the evidence recorded by the Commission. The remarks of Dr. Cunningham regarding the diminution of appetite accompanied by local accumulations of fat as indicating the diminution in activity of the normal processes of tissue waste under the influence of ganja throw light on the evidence of witnesses who ascribe beneficial effects to this drug in cases of severe exertion without sufficient or suitable food. Dr. Cunningham writes :—

" Nature of the animal employed, *Macacus rhesus*, weighing 16 lbs..

" The first inhalation was administered on the 7th of November 1893 and the last on the 12th of July 1894, so that the experiment extended over more than eight months. During this period one hundred and eighty-one inhalations were administered. During the greater part of the period the administrations were repeated almost daily, save on Sundays, but during March they were repeated only on alternate days, and during April and May only at irregular intervals, owing to the fact that at that time the animal was suffering from a mild but prolonged attack of dysentery. During the earlier part of the course of the experiment the animal apparently disliked the treatment, as he violently resisted introduction into the inhalation chamber, was restless when the smoke began to enter it, and not unfrequently attempted to prevent its entrance by plugging the orifice of the supply-tube. As time went on, however, and the experience lost its strangeness, his objections gradually diminished, and were ultimately replaced by a positive desire for the treatment. He then readily entered the chamber, resisted any attempts to remove him from it before he had had a full dose, was restless and uneasy on days on which the treatment was omitted, and, on two occasions on which he managed to make his escape from his eage, showed an evident desire to enter the chamber on his own account.

" The symptoms attending the process of inhalation were not invariably of precisely uniform character. As a rule they came on quietly and insensibly, and

consisted in steadily increasing drowsiness leading on to quiet sleep. During the course of exposure the conjunctiva and eyelids frequently became considerably congested; but this may, of course, have been merely dependent on direct irritation incident on their contact with the smoke. When removed from the chamber, ere profound sleep had supervened, the animal was evidently intoxicated. In many cases he was incapable of sitting up without supporting himself by means of grasping the bars of his cage, and, when less profoundly affected, was very unsteady on his legs. On being introduced into his cage, he not unfrequently, either at once or after a short delay, lay down and slept quietly for some time. On awaking from such sleep, as well as in those cases where sleep did not intervene, he almost invariably showed symptoms which appeared to indicate that he was for some time the subject of optical delusions. He gazed about attentively in directions in which nothing which seemed likely to excite his curiosity was present, and carefully scrutinized the floor of his cage for objects which did not exist. Such symptoms continued to persist for a considerable time after all other indications of intoxication had disappeared, continuing to manifest themselves in greater or less degree during the entire course of the latter portion of any day on which the treatment had been administered in the morning.

" On a certain number of occasions, however, the symptoms did not follow this normal course. On these the onset of signs of drowsiness was greatly delayed, and had hardly begun to show itself ere the animal was suddenly seized with violent general convulsions, and immediately thereafter became profoundly unconscious. The symptoms on the recovery of consciousness in no way differed from those in cases where the earlier ones had followed the normal course. No satisfactory explanation of the occurrence of such exceptional phenomena could be arrived at, and it must remain uncertain whether they are to be regarded as the consequence of certain temporary subjective peculiarities on the part of the animal or of variations in the quality of the drug.

" In no instance was there any appreciable indication of the development of any cerebral excitement either during the administration of the drug or after intoxication had been fully established. The normal symptoms were those of simple drowsiness and loss of will-power accompanied by optical delusions, those characterising the exceptional cases of temporary abnormal activity of the spinal cord and basal ganglia which may very probably have been dependent on diminution in the inhibitory power of the higher cerebral centres.

"The general health of the animal remained excellent during the entire course of the experiment, save for a period during the months of April and May, in which it suffered from dysenteric symptoms. The occurrence of these, however, cannot be in any way definitely ascribed to the use of the drug, as they are of frequent occurrence among monkeys in confinement apart from any special treatment. The only permanent appreciable effect resulting from the treatment manifested itself in the form of a very considerable diminution in appetite for food, which set in shortly after the initiation of the experiment, and thereafter remained persistent throughout its entire course.

" At the desire of the Hemp Drugs Commission, the experiment was brought to a close on the day following my return to Calcutta on the 12th of July 1894. Death was induced by means of prolonged administration of chloroform, and a

post-mortem examination was conducted immediately it had occurred. The results of this were as follows, in so far as mere casual naked-eye inspection goes; for I have already pointed out the detailed histological examination of the condition of the various organs and tissues is a matter not of a few hours, but of many weeks' work; so that it has been impossible for me to carry it out and at the same time to meet the wish of the Commission for the immediate submission of a report. Specimens of all the more important organs have, however, been carefully preserved, and will form the subjects of detailed histological examination hereafter.

"*Results of post-mortem examination of the animal.*—The body weighed 13 lbs. 7 oz., indicating a loss in weight of 2 lbs. 9 oz. during the eight months of treatment. This, or at all events the whole of this, loss is certainly not fairly creditable to the treatment, seeing that for a considerable period not long before the close of the experiment the animal had been subject to an attack of dysentery, which alone would have been sufficient to occasion considerable loss of weight.

"On laying the body open, the phenomenon which at once attracted attention, as unlike any ordinarily present in those of caged monkeys, was the great amount of fat accumulated in the omentum, the mesentery, and the visceral and parietal pericardium. This was specially noteworthy in connection with the markedly diminished ingestion of food which had characterised the subject of the experiment during the greater part of its course, and with the coincident considerable reduction in body weight which had occurred. The body generally appeared to be fairly well nourished, and a considerable amount of subcutaneous fat was present.

"The lungs were quite exceptionally healthy for a caged monkey, neither of them being in the least degree adherent to the thoracic walls; the left one being apparently perfectly healthy, and the right merely showing a few patches of deep congestion towards the base. Under the influence of the osmic acid contained in the fixing solution in which specimens of it were immersed, the muscular tissue of the heart shewed unequivocal signs of the presence of a certain amount of interstitial fat. Whether, however, these were due to true fatty degeneration of the muscular elements proper, or, as is more probably the case, to mere fatty accumulation in the connective tissues, must remain an open question until the detailed histological examination of the tissues has been carried out.

"The liver, spleen, and pancreas appeared to be perfectly normal, save that, as in the case of the cardiac muscle, a slight excess of interstitial fat made its appearance under the influence of osmic acid. The kidneys, the stomach, the large and small intestines, and the cerebro-spinal nervous centres were all apparently perfectly healthy.

"The only peculiar features in the body then which could in any way be rationally regarded as connected with the treatment to which the animal had been exposed were the excessive accumulation of fat in the tissue of the omentum, peritoneum, and pericardium, and the tendency to the establishment of a similar accumulation in the cardiac muscle, the liver, the pancreas, and the spleen.

"But the only persistent symptom attending the treatment during life was a considerable diminution in appetite for food, so that, in so far as the results of

a single experiment afford any ground for inference, it would appear that the most important effect of the habitual employment of inhalations of the smoke of ganja is to give rise to diminution in the normal processes of tissue-waste to such a degree that local accumulations of fat are liable to occur even in spite of the coincident and similarly originating diminution in the ingestion of food. The diminution in activity of the normal processes of tissue waste tends, on the one hand, to give rise to decreased ingestion of food, and, on the other, to local accumulation of fat in spite of this. But if the habitual practice of inhalations of the drug really do produce such effects, it is clear that, in place of being hurtful, it may be positively beneficial to people who are obliged to undergo exertions without having the means of procuring a diet fully adapted to make good the amount of tissue waste normally associated with them. As has been already pointed out, it is necessary to exercise extreme caution in coming to any definite conclusions from the experiment, first, because it is an isolated one, and, second, because the *post-mortem* examination has not yet been histologically completed; but the evidence which it has afforded is, in so far as it goes, rather in favour of the use of the drug under certain conditions than adverse to it."

All three forms of the drug considered together.

484. In considering the effects induced by drinking bhang and smoking charas or ganja, it must be remembered that the same active principle is present in all. The effects, therefore, induced by any one of the three drugs must necessarily depend upon the content of active principle, which is smallest in the case of bhang, and, theoretically at least, largest in charas, weight for weight. Practically it is impossible to compare with anything approaching to accuracy the physiological effects of the three drugs, because at present no definite active principle has been isolated. The alcoholic or other extracts from bhang, ganja, and charas are neither chemically similar in composition nor physiologically equivalent, weight for weight, in the effects they induce; and it is only possible, therefore, to approximately compare the physiological effects of ganja, charas, and bhang *inter se*. When, in addition to these initial difficulties, the disturbing factors, racial and individual idiosyncrasy and habit, come into operation, the question of the immediate effects of the drug becomes a most complex problem to deal with scientifically, or indeed even to generalize on in the broadest sense of the term. And, moreover, though the same active principle is originally present in all three of the drugs, yet when either ganja or charas is smoked, the active principle, not being volatile, must undergo decomposition, new products being evolved. Strictly, therefore, there can be no comparison between the physiological effect of the drug when introduced into the stomach as bhang and the products of the destructive distillation of ganja or charas when smoked and inhaled. And a writer on hemp drugs aptly remarks: "The action of hemp on man is so various that when we read the several descriptions given, differing so widely, we would scarcely suppose we were considering the same agent."

Immediate effects.

485. Judging from the replies of several witnesses, the immediate effect of the moderate use of any of the hemp drugs on the habitual consumer is refreshing and stimulating, and alleviates fatigue, giving rise to pleasurable sensations all over the nervous system, so that the consumer is "at peace with everybody"—in a grand waking dream. He is able to concentrate his thoughts on one subject: it affords him

pleasure, vigour, ready wit, capacity for hard work, and sharpness for business; it has a quieting effect on the nervous system, and removes restlessness and induces forgetfulness of mental troubles; all sorts of grotesque ideas rapidly pass through the mind, with a tendency to talk; it brightens the eyes, and, like a good cigar, gives content; the man feels jolly, sings songs, and tells good stories; it causes bravery in the brave and cowardice in the timid, and, like alcohol, brings out the real character of the man. In young men it may give rise to sensual thoughts, and aphrodisiac effects are mentioned. Some witnesses, on the contrary, state that the drug is not refreshing, and that the consumer is sometimes sleepy and sometimes talkative; or there is no tendency to talk: the conjunctiva become suffused and red, and the moisture dries in the throat and lips; the man becomes peevish, stupefied, sees double; and occasionally it may cause vomiting. Regarding the question of intoxication, witnesses speak of exhilaration and slightly dizzy sensation; a little intoxication, but no stupefaction; a feeling of "briskness" followed by sinking, but no stupefaction; a little heaviness in the eyes, slight narcotic effects, or stupor more or less complete. Others say that the first effect is exciting, then soothing; while some describe the effects as those of intoxication of varying degrees, from moderate to dead drunk. According to certain witnesses, the intoxication of hemp drugs differs from the alcoholic in that only those unaccustomed to the drug are affected, or that intoxication is not much marked in old consumers. Some witnesses state that the drugs allay hunger; others that these effects only result from excessive use; while others deny the power of the drug to allay hunger under all conditions apparently. Similar contradictory statements are made in connection with the alleged power of the drug to create appetite. On this point, however, it may be of interest to note that O'Shaughnessy, as a result of observation, records the fact that hemp drugs in small doses possess an extraordinary power of stimulating the digestive organs: "the appetite became extraordinary" is the remark he makes in describing the symptoms induced in certain of his students by the administration of ¼ grain doses of the resin. A Sind witness, No. 16, says: "It sharpens the appetite, and in this respect the action of the drug is certain and to be depended on." These are the immediate effects mentioned in the evidence. No doubt some of them would only result from an unaccustomed or excessive dose.

Duration of these effects.

486. In connection with the period during which the effects last, it is very difficult to arrive at any general conclusions, as so much depends on individual idiosyncrasy, on habit, dosage, and on the manner in which the drug is exhibited. According to Dr. Russell's experiments, the mental effects appear in from three to five minutes, and the drowsiness and restless sleep may last several hours in cases in which the drug was pushed to produce decided effects. Assistant Surgeon J. E. Bocarro gives fifteen minutes as the period at which intoxication commences after ganja smoking; in the case of charas, with the first pull at the *chillum*. In the case of ganja, the effects last from half to one hour or much longer, and in charas from fifteen to twenty minutes. With bhang the symptoms may set in from twenty to thirty minutes, or may be much delayed; and, according to Assistant Surgeon Bocarro, may last on an average two hours, or, according to a Bombay medical witness (No. 91), six to twelve hours. According to Dr. Russell's Assam experiments, the effects of two drachms of bhang drunk as *goonta* came on slowly and disappeared in three hours. With a solution of the resin in alcohol, thirty drops of the tincture

are stated to have induced slight excitement within half a minute, lasting for a few seconds. In fifteen minutes a feeling something allied to the early stage of intoxication came on. Three grains of extract gave rise to no symptoms for one hour (*Medical Times and Gazette*, 1852). Speaking generally, however, smoking produces far quicker effects than the exhibition of the drug by the stomach, as in the latter case in India the resin in bhang is associated with a large amount of inert insoluble matter, and absorption is thereby delayed; but with pure resin, administered in a finely divided state, absorption from the stomach may occur with great rapidity.

After effects.

487. Various replies are given regarding the after effects induced by the drugs. A very common answer to this question is that no immediate after effects are induced. Others say that "scarcely" any after effects follow the moderate use. Dr. Crombie (Bengal witness No. 104) says: "I have not seen any after effects in these cases, and have spent days in company with native boatmen habitually using ganja in moderation." Another witness states (Sind No. 20): "With bhang none of any importance. Ganja and charas, especially the latter, give rise to a dull frontal headache, singing in the ears, weakened mental power, much thirst, impair the appetite, constipate the bowels, and concentrate the urine." Other witnesses describe the after effects as laziness and languor, stupor, drowsiness, melancholy, weakness, laxity of the body, disinclination to do anything, exhaustion, depression, pains in the body, headache, giddiness, and gnawing at the stomach, nauseous taste in the stomach, and thirst. O'Shaughnessy gives a succinct account of the after effects of bhang and charas. In the case of bhang, "the intoxication lasts about three hours, when sleep supervenes; no nausea or sickness of stomach succeeds, nor are the bowels at all affected: next day there is slight giddiness and vascularity of the eyes, but no other symptoms worth recording." In the case of ganja, "heaviness, laziness, and agreeable reveries ensue, but the person can be easily roused, and is able to discharge routine occupations, such as pulling the punkah, waiting at table, etc." The Commission consider it very probable that in regard to the after effects of the moderate use of these drugs, the evil after effects described by some witnesses are really due to the excessive use, and that witnesses have not always discriminated between the effects of the moderate and excessive use of the drugs.

Replies to the question whether the want of subsequent gratification produces any longing or uneasiness are answered by some witnesses in the negative as regards moderate consumers; others say that a little longing or even uneasiness is experienced for want of gratification. There appear to be no valid reasons why the want of gratification of even a moderate habit should not cause "uneasiness" in some cases, and a "sensation of longing" in many: it is certainly the case with the majority of habitual moderate tobacco smokers, in whom the want of an accustomed smoke certainly does produce "longing," and which may even amount to "uneasiness" in some instances. In no case, however, is the longing or uneasiness experienced by users of hemp drugs for want of subsequent gratification comparable to the cravings of an opium smoker or eater. This matter has, however, already been discussed in dealing with the formation of the habit.

488. There are few, if any, classes of the community some members of which do not use hemp drugs in some form. There are religious objections to the use of intoxicants by Muhammadans, and these deter such of this class as are orthodox from indulging in these drugs. Many of the Hindus who are both orthodox and respectable consider it contrary to their religion to indulge in these or any other intoxicants, though many of the same class also believe that they may, at least occasionally at feasts, take bhang. Orthodox Sikhs do not smoke, and therefore regard ganja and charas as prohibited, though they do not see the same religious objection to drinking bhang. These are illustrations of classes which generally abstain. Members even of these classes are, however, found among the consumers of these drugs. It may be said probably with safety that there is no class of the community that does not to some extent partake of these drugs. At the same time consumption is in the main confined to particular classes. Ganja or charas is chiefly used by (1) "religious" persons, such as fakirs and wandering mendicants, sadhus and pandahs, the followers of Trinath, and other sects; (2) the lower classes of both Hindus and Muhammadans, such as artizans and cultivators, fishermen and boatmen, palki-bearers and day labourers, sepoys and night watchmen, wrestlers and athletes, Chamars and Domes, and others of the lower orders; (3) domestic servants of all kinds, especially those who, as syces, durwans, or dhobis, have especially trying work to do; (4) aborigines of different races, such as Sonthals, Gonds, and many more; (5) tradesmen, Kayasths, and others of the lower middle classes. These are among the classes specially mentioned by witnesses as smoking hemp drugs. Among the upper classes this habit is generally regarded as exceptional and indicating a special tendency to dissipation, but not so among these lower classes. Bhang is also used to some extent by these classes, but is more generally used by the more respectable middle and upper classes. Among those who are specially mentioned as habitually using it are Marwaris, Banias, and jewellers, sharp, intelligent, and successful tradesmen. Bhang is also occasionally used more or less generally by practically all classes on certain feast days and at times of social rejoicing. Like all intoxicants everywhere, the drugs are used in moderation, but more frequently to excess, by licentious and dissipated persons of all classes. Except, however, in the case of religious mendicants, the use by all the classes named above is generally moderate. Excess is exceptional.

Classes who use the drugs as stimulants.

489. From what has been said above it will be expected that there would be many witnesses whose opinion regarding the use of these drugs as stimulants would not be favourable. The very great majority of witnesses in all provinces declare that this use of the drugs is regarded with disapproval by the people generally. This disapproval rests on several grounds. It depends partly on the classes using the drugs. Many witnesses point out that ganja is the cheapest intoxicant, and that it is principally used by the lower classes, while bhang is more used by the upper classes. They state that it is on this account that ganja smoking is regarded with much more general disfavour than bhang drinking. As one witness points out, the feeling is somewhat akin to that which some Englishmen who do not generally disapprove of stimulants have regarding a "vulgar taste for gin." On the other hand, the use of ganja by religious persons is not thus generally disapproved.

Popular opinion regarding this use.

Many witnesses share the view which one witness tersely expresses thus: "Sanyasis are respected by the people; low caste people are not respected." There is no doubt that by far the greater part of the community abstain from any disapproval, and in fact are even strongly in favour, of the use of these drugs by religious persons, although that use is so often excessive. Mr. Monro (Bengal witness No. 206), however, records an instance of his having persuaded the people among whom he was working to dissociate ganja and holiness, so that "a sanyasi was laughed out of the town when I convicted him of habitually consuming ganja."

The disapproval of the use of hemp drugs by classes other than these religious classes is, as has been already indicated, based also on a religious objection to intoxicants still held by many, both Hindus and Muhammadans. There can be no doubt that this orthodox objection influences the public expression of opinion by many who have ceased themselves to share this religious sentiment. It is a respectable thing to denounce intoxicants; and it sometimes requires an effort for a witness to speak favourably or apologetically of intoxicants, especially of those which are used by the lower orders. Another ground for this expression of disapproval by so large a majority of the witnesses is the fact that so many of them have seen nothing but the excessive use. It cannot be too carefully remembered that the moderate use does not obtrude itself, and that much of the evidence given before the Commission deals in truth only with excess. Thus we find a large number of witnesses illustrating the popular disapproval of the drug by pointing out that "ganjeri" or "bhangi" (the names given to the consumers of ganja or bhang) is a term of great reproach. They point out that it means "one who acts as if he had lost all sense," an unreliable and despicable character. Other witnesses explain that these terms correspond to the English word "drunkard," and that the moderate use is not, so far as their experience goes, regarded with contempt at all. Akin to this is the natural desire expressed by several witnesses to assist the young in resisting the temptations of bad companions by establishing in their minds a wholesome antipathy to intoxicants of all kinds, excessive indulgence in which is followed by disastrous results, especially to the young.

Hemp drugs and alcohol.

490. In this connection it is well to notice the references made to alcohol. It is only a minority of the witnesses who compare alcohol and hemp drugs. But it is a striking fact that of these witnesses a majority of about three to one declare alcohol to be more injurious than hemp drugs. In every province the majority of the witnesses who make this comparison hold the view above expressed. This majority includes experienced officers of Government. Thus Colonel Hutchinson, Commissioner of Lahore (Punjab witness No. 4), says: "So far as effects have come to my notice, the effects of liquor are infinitely worse than those of drugs." Mr. J. B. Thomson, Collector of Allahabad (North-Western Provinces witness No. 2), gave evidence to the following effect: "I remember no case from which I can deduce the theory that the use of the drugs is in any way connected with crime; that is to say, from my own personal experience. I cannot say the same regarding alcohol even among natives of this country." Similarly, Mr. Toynbee, Commissioner of Bhagalpur (Bengal witness No. 4), says: "I have never had persons pointed out to me as social wrecks from the effects of ganja. As far as I have seen, many more cases of evil effects from alcohol than from hemp have come before me."

And Colonel Bowie, Commissioner in the Central Provinces (witness No. 2), says: "I can call to mind a great many cases which I have had to deal with as a Magistrate and as a Sessions Judge, in which serious hurt and homicide have been caused by persons under the influence of alcohol, but not a single case of crime of any kind which had been committed under the influence of bhang or ganja." Representative officers from other provinces might be quoted, such as Mr. Vidal or Mr. Campbell, C.I.E., in Bombay, or Mr. H. E. M. James, Commissioner in Sind. The Rev. Mr. Laflamme (Madras witness No. 153), who took much pains in collecting information, gives evidence in the same sense. It is, however, in the northern provinces that there is most experience of these drugs. The only officer of standing in Upper India who holds the contrary view is Mr. T. Stoker, Excise Commissioner, North-Western Provinces (witness No. 6), who says: "I put these drugs above liquor and opium in their injurious tendencies." In saying this, he differs, however, both from his predecessor, Mr. R. Wall (witness No. 233), who held the office for eleven years, and from the Hon'ble A. Cadell (witness No. 1), who is the Member of the Board of Revenue in charge of Excise.

The opinion that alcohol is more injurious than hemp drugs is also expressed by leading Native gentlemen in these provinces, such as Maharaja Bahadur Sir Jotindra Mohan Tagore, K.C.S.I. (Bengal witness No. 163), Munshi Newal Kishore (North-Western Provinces witness No. 231), Babu P. C. Chatterji, Judge, Chief Court (Punjab witness No. 76), and the Hon'ble Gangadhar Madho Chitnavis (Central Provinces witness No. 46). The first of these only need be quoted. He says: "The use of the aforesaid indigenous drugs appears to me to be preferable to the use of ardent spirits and wines now rapidly replacing them to the great injury of the moral and material well-being of our people. Prohibition, I fear, would lead many to take to the use of ardent liquors, and this, in my humble opinion, would be replacing one evil by another of still greater magnitude." These views are held by the great majority of the native witnesses who make the comparison between hemp drugs and alcohol; and there is really no witness of authority on the other side.

This is also the opinion of medical witnesses who make this comparison. It is no doubt an accepted and established opinion among medical men that the evil effects of alcohol are intensified in the tropics. This may explain the very strong opinion held regarding alcohol. Perhaps it is unnecessary to refer to more of these witnesses than to two of more than ordinary experience who take a very strong view of the deleterious character of hemp drugs if used to excess, but a still stronger view regarding alcohol. Surgeon-Lieutenant-Colonel Crombie says: "I believe that the habit of using ganja moderately is absolutely harmless; but I think even the moderate use of alcohol is liable to produce tissue changes in the long run. Further, I here refer entirely to the native community; and it is my observation that when a native takes to alcohol, it is extremely difficult for him to remain moderate; and in life assurance work, of which I have a good deal, I always advise an extra premium in the case of any native who indulges in alcohol even in the most moderate way, and utterly refuse to accept a native life if there is evidence of the consumption of alcohol to any considerable extent which would still be considered moderate in the case of Europeans. My experience leads me to hold the same views of the effects of alcohol on the lower classes.

A native who takes to liquor is lost. As regards the excessive use, I would still place alcohol first. I regard it as most deleterious." The only other medical man who need be quoted is Dr. H. M. Clark, a well-known Medical Missionary in the Punjab (witness No. 46), who says: "As regards charas, I think there can be no such thing as moderate use, if we mean such use as will not leave any permanent bad effect on the system. In whatever quantity it is used, it is bound to be deleterious. I should say that in this country alcohol does more harm than charas." These views are supported by distinguished native medical men like Rai Bahadur Kanny Lall Dey, C.I.E. (Bengal witness No. 117), and others.

It is not within the province of the Commission to come to any definite finding on this evidence as to the comparative effects of alcohol and hemp drugs. The effects of alcohol were not within the scope of the inquiry. As has already been stated, it is only a minority of the witnesses who make the comparison. It was not asked for in the Commission's questions, and has only been incidentally made by certain witnesses. The Commission have not felt called on to test the correctness of the views of the witnesses on this point, as this could only have been done by a full inquiry into the effects of liquor. But it is important to observe the existence of these views. In this connection it is interesting to notice the existence in certain parts of the country of a belief among ignorant persons that "the attack on hemp drugs was due to a desire to foster European liquor" (see the evidence of Mr. William Almon, Assistant Collector, Abkari Department in the town of Bombay, witness No. 38); or, as another witness puts it, "the agitation is attributed to them who are anxious to encourage the spread of alcohol, *i.e.*, the persons who import and manufacture liquor" (V. K. Joglekar, Bombay witness No. 110). The existence of such misapprehensions can only be explained by the difficulty felt in accounting for an agitation against these drugs alone. The Rev. Mr. Laflamme (Madras witness No. 153) says: "Many are surprised to hear that the Government is concerned about a practice which is confined to so small a portion of the people as is ganja and bhang, and is not concerned about the widespread, rapidly increasing, and much more injurious habit of alcoholic drink, from which much greater harm results. I have been six years in the country, and engaged in village work during four years. Before entering on these inquiries I did not know the hemp drugs were in use among the people, and had only met with them in the temples." One witness of much experience (Khan Bahadur Kadir Dad Khan, C.I.E., Sind witness No. 4) says: "All classes of the people, from the most influential spiritual leader to the lowest beggar, will say that the British Government, while not interfering or prohibiting the use of alcohol in their own country, are stopping them here from the use of less intoxicating drugs, which they have been using from time immemorial, and which is also religiously respected."

Injurious effects of hemp drugs (history).

491. Among the ancient physicians the evil effects of the drug are thus referred to by the author of the Makhzan-el-Adwiya: "Afterwards the sedative effects begin to preside, the spirits sink, the vision darkens and weakens, and madness, melancholy, fearfulness, dropsy, and such like distempers are the sequel, while the seminal secretions dry up." Alluding to its popular use, the author dwells on the eventual

evil consequences of the indulgence: "Weakness of the digestive organs first ensues, followed by flatulency, indigestion, swellings of the limbs and face, change of complexion, diminution of sexual vigour, loss of teeth, heaviness, cowardice, depraved and wicked ideas, etc." Iban Beitar was the first to record its tendency to produce mental derangement, and he even states that it occasionally proves fatal. Taki-ed-din-Ahmad, commonly known as Makrizi, who wrote a number of treatises upon Egypt in the 14th century, states that in 780 Hijra very severe ordinances were passed in Egypt against the use of the drug; the famous garden in the valley of Dijoncina was rooted up, and all those convicted of the use of the drugs were subjected to the extraction of their teeth; but in 799 Hijra the custom re-established itself with more than original vigour. Makrizi states: "As its consequence, general corruption of sentiments and manners ensued, modesty disappeared, every base and evil passion was openly indulged in, and nobility of external form alone remained to these infatuated beings." Rumphius alludes doubtingly to the alleged aphrodisiac powers of the drug, and states that the kind of mental excitement it produces depends upon the temperament of the consumer. O'Shaughnessy in his introduction to certain experiments with hemp drugs remarks: "As to the evil sequelæ so unanimously dwelt on by all writers, these did not appear to us so numerous, so immediate, or so formidable as many which may be clearly traced to over-indulgence in other powerful stimulants or narcotics, *viz.*, alcohol, opium, or tobacco." O'Shaughnessy also refers to insanity occasioned by continued hemp inebriation as follows: "Before quitting this subject, it is desirable to notice the singular form of insanity which the incautious use of hemp preparations often occasions, especially among young men who try it for the first time. Several such cases have presented themselves to our notice. They are as peculiar as the 'delirium tremens' which succeeds the prolonged abuse of spirituous liquors, but are quite distinct from any other species of madness with which we are acquainted. The state is at once recognized by the strange balancing gait of the patient, a constant rubbing of the hands, perpetual giggling, and a propensity to caress and chafe the feet of all bystanders of whatever rank. The eyes wear an expression of cunning and merriment which can scarcely be mistaken. In a few cases the patients are violent; in many highly aphrodisiac; in all that we have seen voraciously hungry. There is no increased heat or frequency of circulation or any appearance of inflammation or congestion, and the skin and general functions are in a natural state. A blister to the nape of the neck, leeches to the temples, and nauseating doses of tartar emetic with saline purgatives have rapidly dispelled the symptoms in all the cases we have met with, and have restored the patients to perfect health." This description of what O'Shaughnessy considered hemp drug insanity is of considerable interest. It is clear from his account that the symptoms were of short duration, almost typical, and that under treatment recovery was rapid. Such cases as those described by O'Shaughnessy are probably similar to the class of cases which have occasionally come before the Commission as having occurred while under observation of the certifying medical officer, and which on reaching the asylum were sane. They were probably more of the character of intoxication than of insanity. The curious point, however, in connection with O'Shaughnessy's account of hemp drug insanity is the absence of all information as to cases of longer duration, such as the class of

cases now met with in asylums and attributed to hemp drugs. And this omission is all the more striking because O'Shaughnessy had devoted special attention to the subject of hemp drugs, and indeed was the first to draw the attention of European practitioners to the value of the drug as a remedial agent; and it is hardly possible that if in his day any large number of persons insane from the alleged use of the drug had been admitted into asylums, he would have been ignorant of the fact and omitted to notice it in his account of the effects of the drug.

Effects in other countries.

492. The action taken in Turkey, Egypt, Greece, and Trinidad in the direction of the prohibition of the use of hemp drugs will be noticed later (*vide* Chapter XIV.) The Commission have not before them material to enable them to judge of the statements regarding the effects of the drugs in these countries which formed the basis of the action taken. The note drawn up in 1890 by the Sanitary Board of Greece, on which the action in that country was based, contains a statement of the effects of the drugs as alleged to have been ascertained (*a*) by scientific inquiry in India and other "warm countries" by experts, among whom O'Shaughnessy is specially mentioned, and (*b*) from statistics of the Indian (and especially the Bengal) lunatic asylums. But there is nothing given in original of the views of any of the experts named. The views of O'Shaughnessy and the Indian asylum statistics are already before the Commission. They have therefore no new material in this note. They are compelled therefore to set it aside. For the same reason they find themselves unable to arrive at any opinion in regard to the recent controversy between Dr. Ireland and "Pyramid" in the *British Medical Journal* regarding the effects of the drugs in Trinidad and Egypt. They pass on, therefore, to the evidence available in this country.

Failure of witnesses to distinguish excessive from moderate use.

493. In order to ascertain the alleged noxious physical, mental, or moral effects which are popularly believed to be induced by use of hemp drugs, the Commission considered it desirable in framing the questions on these points to clearly discriminate between the *moderate* and *excessive* use. The replies show, however, that in very many instances the witnesses have failed thus to differentiate between the two uses of the drug. This may be partly due to the somewhat inherent difficulty in discriminating or to carelessness on the part of persons who conducted the inquiries. The evidence, moreover, before the Commission clearly demonstrates that any departures from the normal in health, if associated with the mere mention of the hemp drug habit, is in most cases sufficient for "cause" and "effect".

Medical witnesses.

494. In analyzing the replies given to question No. 45, which deals with the alleged noxious effects of the moderate use of the drugs, the Commission have thought it expedient to indicate first the view taken by the medical witnesses, and then to consider the tenor of the evidence given by all witnesses, including medical. In considering the medical evidence, the witnesses have been divided into three classes—(*a*) superior medical officers, including assistant surgeons; (*b*) hospital assistant class; (*c*) native practitioners who have not been trained in Medical Colleges, and who practise according to native methods. In estimating the value which should be

attached to the evidence tendered by each of these classes, the Commission consider it necessary to point out that the superior medical officers are by their training necessarily in a far better position to judge intelligently of the effects of the drugs than the other two classes; but the superior medical officer class comprises both European doctors and assistant surgeons. The former class—in all but exceptional instances—do not see nearly so much of the common or general dispensary practice as the assistant surgeons. Though at head-quarters they visit the dispensaries as regularly as possible, and see some of the patients and assist in prescribing, they are rather the "superintendents of the dispensaries," and occupy generally a position more or less of "consultants" to the assistant surgeons, who actually conduct dispensary practice, and who diagnose the ordinary diseases and prescribe for them. It therefore appears to the Commission not unlikely that the views of most European medical officers may have been based on less direct contact with the people, and may have even been sometimes derived more or less from the assistant surgeons, their immediate subordinates. The hospital assistants as a class are much inferior to assistant surgeons in medical training and general intelligence; but they possess one advantage over the assistant surgeons. From their inferior social position they have a more intimate knowledge perhaps of the habits of the persons who frequent dispensaries, and who constitute the class to which hemp-drug consumers belong. The native practitioners probably have a still more familiar knowledge of the habits of the people; but the absence of systematic training renders them practically incompetent to form a true estimate of "cause" and "effect," and their ideas of the noxious effects of the drugs are doubtless largely coloured by the popular and common views on the subject.

General view of the whole evidence regarding evil effects.

495. In respect to the evil effects—physical, mental, and moral—ascribed to the habitual use of these drugs, there is one feature that must strike any one who reads the evidence—that is, the large number of witnesses who do not answer at all the questions (No. 45 and No. 46) regarding evil effects. Among Europeans over one-half of the witnesses and among Natives about one-third abstain from answering. This must be due in large measure to the fact that the effects have not obtruded themselves on observation. This is what is stated over and over again by witnesses of the greatest experience. Of those who do answer, about one-half of the Europeans and one-third of the Native witnesses ascribe no evil effects at all to the moderate use of ganja and charas. Those witnesses who specially mention bhang do so, as a rule, to except it from their statement regarding the evil effects alleged to result from hemp drugs generally. These are not, however, very numerous. It is unnecessary to do more than take up the evidence regarding hemp drugs generally. About one-half of the European witnesses and two-thirds of the Native witnesses who answer at all the question regarding the alleged evil effects of the moderate use do so in the affirmative. But of these about one-half of both classes do not discriminate between the moderate and excessive use. They answer generally concerning the use of the drugs without drawing the line between moderation and excess. The number of witnesses who really give evidence to the effect that the moderate use of these drugs causes injury is therefore less than those who distinctly affirm that they do not, and forms but a small fraction of the whole body of witnesses. The evidence regarding the evil

effects of the excessive use is much stronger. The number of witnesses who are able to give information is indeed much smaller than might have been expected, and certainly indicates that the evil of excessive consumption is not widespread. But of those who do speak of the effects of excessive consumption, the very large majority state that they are evil. There are very few exceptional witnesses who allege that the excessive use does no harm. This is precisely what might have been expected. The excessive use of any intoxicant cannot be other than evil, and in the great majority of cases of excess the evil must be manifest.

The general character of the evidence.

496. The impressions which the evidence leaves on the mind are these. The evil results from the use of the drugs, whether moderate or excessive, have not hitherto obtruded themselves on observation. The only manner in which they have really attracted attention is in respect to asylum statistics. Apart from this, the majority of witnesses have not seen the effects at all, and know nothing about them. Of the minority, a few witnesses only have had their attention drawn to the effects before this inquiry began; the rest knew nothing of them until they began to search them out on receipt of the questions issued by the Commission. Some of these witnesses fail to remember that in going to public places, such as shops or shrines where smokers congregate, to ascertain the effects, they have taken measures to see not the moderate, but the excessive, use of the drugs. They thus fail to discriminate between the moderate and excessive use. Their evidence is as unfair a representation of the general effects of the drug as would be the evidence of men regarding the general effects of alcohol who judged of these effects solely from what they saw in public houses in England. Further, a great deal of the evidence is based upon a casual observation of very few cases of actual consumers. The number of cases seen by a witness is as a rule too few to form an adequate basis for definite opinion in respect to results. Yet there are but few witnesses who have seen and admitted this necessity for caution in the expression of opinion. Again, these cases are not only few in number, but as a rule very inadequately observed. There are very few of them indeed which have been known to the witnesses in any way intimately or for any length of time. Occasionally a case is mentioned of a relative or personal acquaintance who has been seriously injured by excess. But as a rule the cases mentioned have been cases of wandering mendicants, devotees at temples or strangers in the street, cases observed in a shop visited for the purpose, or in a collection of social wrecks brought together for the witnesses' inspection, or (in the case of medical witnesses) outdoor patients who have come casually for relief, and whose history is unknown. Clearly these are not cases on which satisfactory conclusions can be based. It must be impossible to say with anything like certainty what features from among the physical, mental, and moral features of the case are due to circumstances and causes antecedent to or independent of the hemp drug habit, and what (if any) may be reasonably ascribed, and in what degree, to that habit.

The necessity for testing it.

497. The result of this has been to make much of the evidence vague and unsatisfactory. It has been deemed necessary, therefore, to make an effort to sift and test the evidence. It can hardly be considered necessary to question the view that excessive con-

sumption of these drugs indicates and intensifies mental and moral weakness, and must also be attended in all but exceptional constitutions with some visible physical injury. In regard to the moderate use, on the other hand, it would be quite wrong to accept without clear evidence the view that physical, mental, and moral injury resulted. In the absence of all physiological evidence of tissue changes being produced by these drugs, as they are produced by alcohol, it must be presumed, until the contrary appear, that the moderate use does not cause injury in any but the most exceptional cases. General experience warrants the admission that even the moderate use of such drugs may cause injury in exceptional cases owing to idiosyncracy or peculiar diathesis. But as a rule, practically without exception, the presumption must be against injury from the moderate use. It is necessary then to weigh the evidence carefully so as to ascertain both whether there is any ground for believing that the moderate use is attended by evil results at all, and also what the particular results are which under any circumstances follow the use of the drugs.

Limitation of the issues raised.

498. Leaving out of account for the present the question of the connection of the drugs with insanity, there is no evidence of any weight regarding mental and moral injury from the moderate use of the drugs. Vague statements are made by a small minority of the witnesses regarding the stupidity or moral weakness of consumers whom they have met. But after making allowance for the fact that these observations have often been of excessive consumers, and for the lower mental and moral tone found generally among the lower orders to which the consumers, or at all events the smokers of hemp drugs, almost exclusively belong, there is little left in the evidence on which to base any opinion. The statements, too, are of results of an indefinite character and difficult to gauge or account for even with careful observation of the whole history of a case which is never possible in the instances adduced. Similarly, in regard to physical injury, there are a considerable number of vague statements made regarding "impairment of constitution," debility, emaciation, and other physical results of an indefinite character. These are largely accounted for by the mere fact that it is the poorer classes who ordinarily use these drugs. The poor cultivator or day labourer, who works hard and has nothing but a bare sufficiency of the necessaries of life, cannot be expected to be sleek. Witnesses who have spoken of the use of hemp as making men thin and ill-nourished looking have admitted that their experience is based only on what they have seen of the poor, and that among the poor there is no specially marked appearance of this kind among the consumers of hemp. A similar fallacy is noticed by several witnesses. They point out that the drugs, which are more used in malarious and unhealthy tracts than elsewhere, are credited with the evil effects which result from the malarious and unhealthy conditions. As a matter of fact, the moderate consumer in such localities cannot, they say, be distinguished from the non-consumer. Then, again, a great deal of the vague evidence regarding the general injury to the constitution alleged to result from the use of hemp drugs is based on what the witnesses know of fakirs and wandering mendicants who consume the drugs. It is surprising to find witnesses who have had years of experience, whose work has brought them into close contact with the ordinary life of the people, testifying that they have never seen the drugs used except by religious mendicants, or known any of the effects of the

drugs except as shown in these classes. The mendicant, if he is ascetic, is naturally of a very spare and even emaciated appearance. The use by such mendicants is better known to the community generally than the use by any other class. The mendicant pushes himself to the front wherever he goes, and he has no hesitation in asking for precisely the thing he wants at the time. His use of hemp is therefore known to all who meet him. The life he leads—a wandering, homeless life of exposure and self-imposed privation and unrest—makes him as a rule thin and miserable in appearance. This appearance of the man, an unknown stranger, once seen perhaps as he passes through the village on his round of India, and never seen again, is often associated in the mind of the witness with the use of hemp and not with the life that really produces it. Allowance must also be made for the large proportion of cases of excess which must have been found among the comparatively few cases observed by the witnesses. The religious mendicant, for example, uses hemp drugs very frequently to excess; and this is the class which has hitherto attracted most the attention of the witnesses. As to the cases seen since the Commission's questions drew attention to the subject, it must be borne in mind that they are of necessity chiefly cases of excess. A Civil Surgeon asks a native practitioner to show him cases of the effects of hemp drugs, and the latter selects a broken down consumer from among his patients and produces him. The Civil Surgeon forgets that he has never himself in years of experience seen the effects of the drugs; he forgets that unless the consumption of hemp is most exceptional, or his friend's practice exceedingly small, it is only to be expected that there should be consumers among his patients; and he accepts the case as an illustration of the ill effects of the drugs. A Collector asks a subordinate to collect the consumers in a town or village, and the subordinate gets together the social wrecks from among the consumers of the drugs. No one would willingly join such a party for inspection except dissipated and degraded persons. Yet the Collector, without remembering this, and without enquiring how many of these social wrecks are also consumers of alcohol and other intoxicants or are addicted to other vices, thinks he has got hold of something tangible to enable him to judge of the effects of the drugs. Similarly the missionary, anxious to assist in this inquiry, goes to the drug shop, and sees the habitual excessive consumer at his pipe. Perhaps he finds him a lean, miserable man, though indeed some witnesses of this class have evidently been agreeably surprised at what they have seen. The witness is, however, led as a rule to ascribe anything of misery or evil that he sees to the drug about which he is interested without considering that he knows nothing of the history or circumstances of the men whom he thus meets for the first time. Such mistakes are not confined to European witnesses. Native witnesses of all classes have similarly searched out cases of evil results ascribed to hemp drugs, have obtained assistance in collecting them, have visited the places where consumption to excess is practised, and have often given what they have learned in this hasty inquiry as the undoubted and inevitable effects of the use of the drugs. The mere fact that they had no information to give without making inquiry, and that the effects of the drugs had never attracted their attention before in all their lives, should have warned them of the necessity for caution in generalising from the limited experience they had thus specially to acquire. The difficulty, if not impossibility, of judging under the circumstances in almost any case whether

the conditions observed were due to such general causes as poverty or malaria, or to such special causes as vicious or dissolute habits or even disease, quite apart from hemp drugs, has been too often forgotten. And the evidence is vague and unreliable. On the whole, then, it seems best to devote attention to clear and definite issues, and to discuss under physical effects the alleged causation of specific diseases like dysentery, bronchitis, and asthma which are frequently mentioned; under mental effects, the alleged causation of insanity; and under moral effects, the alleged connection between hemp drugs and crime.

CHAPTER XI.

EFFECTS—PHYSICAL.

Medical evidence regarding dysentery, bronchitis, and asthma.

499. In regard to these definite physical results, the only evidence to which much weight can be attached is the evidence of the medical witnesses. From their training and opportunities of observation they are the only witnesses qualified to give reliable evidence. It is proposed to examine this medical evidence in detail.

Bengal.

500. In Bengal eight commissioned medical officers were examined on the effects of the moderate use of the drugs. Surgeon-Lieutenant-Colonel Russell (witness No. 105), 20 years in civil employ in Bengal and Assam, a witness whose evidence has frequently been quoted by the Commission, stated that the use of the drug does not cause bronchitis, dysentery, or asthma, and that scarcely any other noxious effects are induced. Surgeon-Lieutenant-Colonel Russick Lall Dutt (witness No. 107), an officer of over 20 years' experience, stated: "Very moderate smoking of ganja or charas or moderate drinking of siddhi in infusion do not produce any appreciable effects...........but these moderate cases are seldom long-lived. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems, which predispose them to acute diseases and cut their lives short." Surgeon-Lieutenant-Colonel Price (witness No. 108), of 21 years' service, who had frequently come across consumers of hemp drugs, was unable to answer the question regarding effects. Surgeon-Captain Prain (witness No. 113) stated: "I do not believe that the habitual moderate use of any of these drugs produces any noxious effects—physical, mental, or moral. I think that perhaps the use of bhang does injure the digestion and impair appetite even when used moderately, but I am convinced that it neither causes dysentery, bronchitis, or asthma." Surgeon-Major Cobb (witness No. 110) stated that the drugs did not cause asthma, bronchitis, or dysentery; and in cross-examination he stated: "I have no experience that the *excessive use* of the drug produces dysentery and bowel-complaints." Surgeon-Lieutenant-Colonel Flood Murray (witness No. 102), five years in military service and nineteen years in civil employ, quoted the opinion of a pandit whom he consulted regarding the ill effects of the drugs. In cross-examination he stated: "The general statement as contained in my written answer is a statement made to me by this hakim and others to whom I applied for information. *My own experience in no way corroborates it.*" "Surgeon-Lieutenant-Colonel Bovill (witness No. 109), of 21 years' service, stated that the habitual moderate use of bhang does not produce any ill effects, and in many cases that of ganja is equally harmless. He added: "I know of no case where it has caused bronchitis, dysentery, or asthma, but I have noted hoarseness of the voice probably due to some laryngeal irritation among ganja smokers." Surgeon-Lieutenant-Colonel Crombie (witness No. 104), of over 20 years' service, is not aware of any ill effects being produced by the moderate use of the drugs; but he added: "If any were produced, the use would no longer be moderate, but excessive:" In cross-examination Dr. Crombie stated: "I have had no experience of any diseases attributable to ganja. My experience has been chiefly in Eastern Bengal, where ganja is largely consumed."

Twenty-three assistant surgeons were examined. Assistant Surgeon Devendranath Roy (witness No. 123), of over 20 years' service, and who has had service in Rajputana, the North-Western Provinces, Behar, and Bengal, where hemp drugs are used by a large portion of the people, is of opinion that those who smoke ganja not more than twice or thrice a day do not suffer in general health; bhang does not impair the digestion, whereas ganja does. "Those of my patients," he remarks, "who admitted having been habitual ganja smokers suffered from dysentery or diarrhœa, but they have been exposed to conditions which produce these ailments. Hence I do not draw any conclusion as to ganja being a primary cause of those diseases." Assistant Surgeon Preonath Bose (witness No. 122), Teacher of Materia Medica and Pharmacy in the Dacca Medical School, clearly has no personal knowledge of the effects, as he remarked: "Evidence on these points is conflicting. Some of the consumers maintain, others deny, that evil effects are produced." Another teacher at the same school (witness No. 121) stated: "Evidence on these points is conflicting. The general consensus of opinion is that the habitual moderate use of bhang and ganja does not impair the constitution." Assistant Surgeon Soorjee Narain Singh, of 28 years' service, now Teacher of Materia Medica, Patna Medical School (witness No. 125), stated that "habitual moderate consumers of bhang, ganja, or charas do not apparently suffer from any injurious effects." Assistant Surgeon Narendra Nath Gupta (witness No. 120) as Deputy Superintendent of Vaccination and as a Deputy Sanitary Commissioner and as Civil Medical Officer has had considerable opportunities for noting the effects of the drugs. His opinion is that the moderate use of ganja and bhang does not produce any noxious effects. Durga Dass Lahiri, L.M.S. (witness No. 132), a private medical practitioner, said: "I have not seen any evil results mentioned when taken moderately, but it is very difficult to keep to moderation." Assistant Surgeon Taraprosanna Roy (witness No. 116) is Chemical Examiner to the Government of Bengal. He stated that the habitual moderate use of the three drugs is not known to produce any noxious effects. Assistant Surgeon Bosonto Kumar Sen (witness No. 119) has had service in ganja producing districts. He stated that the use of ganja and bhang produces noxious effects, and "generally produce dysentery, asthma, and bronchitis." The cross-examination of this witness is of interest. "I have seen more than one person, about half a dozen, in my village.........suffering from dysentery, bronchitis, and asthma who were also ganja smokers. *They were all excessive smokers.* These effects do not follow the moderate, but the excessive, use. It is a mistake to have put them under the moderate use.........The fact that they were ganja smokers led me to believe that these effects were due to ganja........I have no recollection of ever treating any case of dysentery, bronchitis, or asthma caused by ganja. *These cases are the basis of my remarks.* I do not remember any case of dysentery, bronchitis, or asthma in a ganja smoker which I attributed to any other cause. In other words, when I saw ganja smokers suffering from these diseases, I attributed them to ganja. *This was twenty years ago*, before I was a medical student." Pyari Sankar Dass Gupta, L.M.S. (witness No. 134), is a private medical practitioner, Secretary to the Bogra Medical Society of ten members, and a member of a temperance association founded by the late Keshub Chunder Sen. The witness is pledged against the use of all intoxicants. This witness submitted three papers to the Commission which seem to illustrate the development of tradition into opinion. In one paper the witness states: "The smokers of ganja often suffer from hoarseness of voice

produced by the continual inhalation of its fumes, giving rise to sore-throat, bronchitis, and carbonaceous phthisis............It has long been *a tradition* in our country that the *ganja-khors* always die of dysentery, their intestines gradually sloughing away." In his second paper the witness states: "Ganja smokers generally die of bloody dysentery, asthma and phthisis, and hæmoptysis." And in his last paper he says: "It produces bloody dysentery and chest diseases, blood-spitting, bronchitis, asthma, and phthisis." Kailas Chundra Bose, L.M.S. (witness No. 135), is a private medical practitioner in Calcutta with an extensive practice. He states that no ill effects are produced by the moderate use, and that, instead of causing bronchitis, dysentery, or asthma, it relieves these affections. The witness, however, states in his oral examination: "My experience is not to any large extent what I have gathered in my practice, but rather what I have learnt from smokers." Assistant Surgeon Akbar Khan (witness No. 124) is another Teacher in the Patna Medical School. He states the habitual moderate use of any of the drugs does not produce noxious effects, but that charas and ganja cause dysentery, bronchitis, and asthma if the consumers are not well fed. Witnesses Nos. 126 and 138 consider that no ill effects are produced. Assistant Surgeon Upendra Nath Sen (witness No. 118) states that bronchitis and asthma are common complaints of ganja smokers. Madhab Krishna Dass, L.M.S. (witness No. 158), a private practitioner in Calcutta, considers that smoking may cause dysentery, bronchitis, or asthma. Assistant Surgeon Durga Nath Chakravarti (witness No. 150) considers that "ganja causes dysentery after a long run." Annoda Prasanna Ghatak, M.B. (witness No. 148), a private medical practitioner, considers that digestive complaints are caused when good food is not procurable. Rakhal Das Ghosh, L.M.S. (witness No. 149), a private practitioner in Calcutta, had apparently seen no ill effects caused by the drug. The remaining witnesses in this class clearly failed to discriminate between the moderate and excessive use, and their evidence has not been considered.

Three hospital assistants were examined. One gave no reply regarding moderate use. The other stated: "The habitual moderate use of ganja or charas does not produce any noxious effects—physical, mental, or moral; but the use of ganja impairs the constitution in some way or other...........and has a tendency towards bronchitis and asthma." Witness No. 145 is a vernacular class hospital assistant, but not now in Government employ. According to this witness, moderate use of ganja leads to excessive use. "The habitual moderate consumers, as well as the excessive consumers, suffer in their lungs and become insane.........No intoxicant can be taken in moderation except when administered medicinally."

Fifteen native practitioners were examined. Bijoya Ratna Sen (witness No. 151), a kabiraj practising in Calcutta, considers that the habitual moderate use of ganja or charas, but not siddhi, may in some cases cause bronchitis, dysentery, or asthma. Witness No. 152, also of Calcutta, gives the same reply couched in the same language. Witness No. 126, of Nattore, in the Rajshahi district, and witness No. 153, of Calcutta, both consider the moderate use harmless. Piyari Mohan (witness No. 154), a kabiraj, states: "I know it causes dysentery, and I believe owing to its heating power it can cause bronchitis and asthma." Kedareswar Acharjya (witness No. 137) remarks: "Those ganja smokers who cannot command abundant wholesome food suffer from dysentery, but it is difficult to determine how far it is due to ganja or to improper food. As to asthma, I have not seen any typical case originating from ganja smoking. I know that a chronic catarrhal condition of the air passages with a certain amount of spasm is the misfortune of

many old ganja smokers. I know a friend who suffered from chronic bronchitis, and in whom asthmatic fits were induced by attempts to smoke ganja." The witness refers also to another case in which a habitual ganja smoker had an asthmatic attack "which subsided on breaking off the habit and reappeared on resuming it." This witness lays stress on personal idiosyncrasy as modifying the effects of the drugs, and on the importance of a diet rich in fat. Witness No. 155, another kabiraj, states that, while no ill effects are produced, occasionally it causes dysentery, bronchitis, and asthma. Witness No. 128, also a kabiraj, states that, according to the Aurveda Shastra, smoking these drugs causes bronchitis and asthma, and in his opinion "even the moderate use of any of these drugs, not according to the rules of Shastra, is injurious in its effects." This witness does not appear to have any personal knowledge of ill effects, but to base his views on the teachings of the Shastras. Witness No. 139 states: "Certainly they produce noxious effects on the moral and physical constitution;" but as the witness is silent as to the effects of excessive use, probably he has not discriminated between the two uses of the drugs. Witness No. 157, a vaid, considers that even the habitual moderate use of these drugs produces noxious effects. This is the pandit who was consulted by Dr. Flood Murray (witness No. 102), and who produced two cases of hemp drug asthma and weakened heart for Dr. Murray's inspection. These seem to have been the only cases in any way connected with hemp drugs that he had. Witness No. 146 is a zamindar and medical practitioner, and does not reply as to effects. Witness No. 147 studied two and a half years at the Calcutta Medical College, but took no degree. He states that no noxious effects are produced without giving details.

Assam.

501. Three commissioned and three uncovenanted medical officers were examined in Assam. Surgeon-Major Macnamara (witness No. 20) has been for thirteen years among people who make use of hemp products to a greater or less degree. He is Civil Surgeon of Tezpur, and has had opportunities of observing the effects of the drug on tea garden coolies. Regarding the effects caused by the moderate use of the drugs, the witness remarked: "I can't define moderation no more than I can in the case of alcohol. The limit is reached when any ill effects are apparent when the limit is crossed. The constitution is impaired and digestion is injured. Dysentery, bronchitis, and asthma find an easier victim." On cross-examination, the witness stated: "In regard to the effects of the drugs, I mean what I have seen in people taking the drugs just as I know the effects of alcohol. I have never seen a man actually taking ganja, although I have tried to get people to do so." Surgeon-Major H. C. Banerji has had 14 years' service, out of which five years have been passed as a Civil Surgeon in Assam. This officer considers that bronchitis, asthma, and dysentery are not produced by the moderate use of the drugs. Dr. Macleod (witness No. 23) stated that bronchitis, asthma, and dysentery are caused, but fails to answer the question regarding results of excessive use; and there is every probability that he failed to discriminate between the moderate and excessive use. Surgeon-Major Mullane (witness No. 19), out of nearly 17 years' service, has spent 13 years in the plains districts of the Assam Valley. Regarding effects, he remarked: "Among natives there is a widespread belief that the mortality among ganja consumers from bowel complaints is heavy." He fails to answer the question regarding results of excessive use; and from the nature of his reply quoted it is fair to assume that he has no personal knowledge regarding

effects of either the moderate or excessive use of the drugs. Dr. Partridge (witness No. 22) is an officer of 26 years' service, and stated that he has never seen the evil effects of the drug except in cases under observation for insanity; "the effects apart from that have never attracted my attention."

Three assistant surgeons were examined. Witness No. 25 states: "Moderate use has not, I believe, much to do with bronchitis, dysentery, or asthma." Witness No. 26 considers that "ganja smoking causes asthma and bronchitis," but he does not appear to discriminate between the moderate and excessive use. Witness No. 30 states that the drug "does not cause dysentery, bronchitis, or asthma; rather moderate ganja smoking allays hard breathing in asthma."

Two hospital assistants were examined. Witness No. 27, after stating in his paper that in long standing cases the use of the drug is certain to cause bronchitis, asthma, and dysentery, admitted in his cross-examination: "It is no use my making any statement, because I have no experience of the effects of ganja, and in fact know nothing about it." Witness No. 28 considers that the drug causes bronchitis, asthma, and dysentery; but he fails to answer the question regarding results of excessive use, and it is fair to assume that he has not discriminated between the moderate and excessive use.

Only one native practitioner was examined (witness No. 31), who considered that bronchitis, asthma, and dysentery were caused by the moderate use; but from his written statement it is obvious that he failed to discriminate between the moderate and excessive use.

North-Western Provinces.

502. In the North-Western Provinces nineteen commissioned and two uncovenanted medical officers were examined. Surgeon-Major Tuohy (witness No. 87), of thirteen years' service, stated: "I am unable to answer these questions from personal observation. The consumers of the drugs have assured me that they cause no illeffect s of any kind when taken in moderation. One man only said that bronchitis and asthma were caused." Witnesses No. 75 and 89 stated that no ill effects are induced by the moderate use. Dr. Harding (witness No. 92) in his paper ascribed bronchitis and asthma to the moderate use, but on cross-examination admitted that "the moderate use of these drugs does not in my opinion cause any injury or lead to any baneful results." Surgeon-Captain Roberts (witness No. 91) premises his written statement by remarking that "until this enquiry I knew absolutely nothing about the hemp plant, its use or abuse, save a few grains of information acquired by any student of materia medica in a medical school." Dr. Roberts has had 5½ years' service in India; for one year he toured through towns and villages of the North-Western Provinces and Oudh, and for nearly two years he has acted as a Civil Surgeon, and for the remainder of his service he was in charge of native regiments. Dr. Roberts remarked: "So far as the foregoing opportunities served to impress my powers of observation, absolutely no question of the use, and still less of the abuse, of hemp drugs by the people of India has arisen in my mind prior to this inquiry.................Those who most strongly aver the ill effects of hemp deal (when questioned for definite facts) in generalities, suggesting a dyscrasia, loss of functional power, impotence, chronic rheumatism, pallor, and atrophy, and all these results are precisely what I am led to expect from malarial and splenic cachexia." Surgeon-Major F. C. Chatterji (witness No. 85) has had a lifelong experience of India from Peshawar to Burma.

He stated that no ill effects from the moderate use are known to him. Surgeon-Lieutenant-Colonel B. O'Brien (witness No. 80), of over 20 years' service, stated that no impairment of the constitution is produced; "it gives great relief in dysentery." He added: "In both the Agra and Benares Lunatic Asylums it is thought by the officials that asthma is more prevalent amongst the insane who indulge in ganja. I could find no evidence to substantiate this idea. During my 20 years' attendance at dispensaries in these provinces, I have never met a patient who alleged that he was suffering from the effects of the use, moderate or otherwise, of hemp drugs." Surgeon-Major Cadge (witness No. 81), of over 15 years' service, stated that the habitual moderate use of bhang does not act injuriously in any way any more than the habitual moderate use of alcohol. Surgeon-Major W. Deane (witness No. 88), of 13 years' service, ten of which have been spent in the North-Western Provinces and one in Burma, has no personal observations regarding ill effects to offer. The greater part of his information has been derived from an assistant surgeon. Surgeon-Lieutenant-Colonel A. J. Wilcocks (witness No. 76), of over 20 years' service, has no personal knowledge of ill effects ensuing from moderate use. "On the contrary, it is an excellent drug in the treatment of dysentery." Surgeon-Lieutenant-Colonel Moriarty (witness No. 79), of over 20 years' service, stated on cross-examination: "I have been led to understand that it was a peculiarity of charas smoking to tend to cause asthma............ I have never personally seen any case of asthma or bronchitis which I could attribute to charas." Witness No. 93 made no attempt to discriminate between the moderate and excessive use of the drugs. Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper (witness No. 74), of 33 years' service, of which 30 years have been spent in civil employ, remarked that no ill effects are induced in a healthy subject by the moderate use of the drugs; but, on the contrary, he considers that in some cases of asthma and chronic bronchitis smoking ganja or charas may be beneficial. Cross-examined as to the basis of his remarks, Dr. Hooper stated: "My remarks about the absence of ill results from the moderate use of the drugs on a healthy subject are based on enquiry made from natives both recently and formerly. I have not seen asthma or bronchitis due to smoking ganja. I have no experience of such smoking as a remedy for these diseases." Surgeon-Captain Morwood (witness No. 90), of 6½ years' service, who has had no opportunity of obtaining information about hemp drugs, stated that ill effects are probably not induced if good food be procurable. "May perhaps cause cough." Surgeon-Lieutenant-Colonel G. Hall (wintess No. 78), of over 20 years' service and large jail experience, considers that no ill effects are caused by moderate use. Surgeon-Captain Weir (witness No. 84) stated that charas and ganja weaken the constitution; bhang does not seem to do so: ganja and charas both cause difficulty in breathing; bhang does not. The witness does not touch upon the effects of excessive use, and may be presumed to have made no distinction between moderation and excess. Surgeon-Captain C. Mactaggart (witness No. 83) stated that in moderate doses it does not appear to have any effect in producing diseases; the witness bases his opinion on what he had learned from prisoners who had been consumers of hemp drugs before coming into jail under his charge. Surgeon-Major E. Mair (witness No. 82) has been in the Jail Department for a number of years, but has had no special opportunities for obtaining information. He stated: "It is a common opinion that smoking ganja or charas is a frequent cause of bronchitis and asthma." The witness does not deal with the results of the excessive use of

the drugs, and may be presumed not to have discriminated. Surgeon-Lieutenant-Colonel Holmes (witness No. 77) is also a Superintendent of a central jail. He stated: "Those who habitually smoke ganja or charas suffer from chest affections; ....said also to cause dysentery, bronchitis, and asthma." The witness does not distinguish between moderate and excessive use; and the basis of his information is "from seeing effects on prisoners and others, and from enquiries made of the various officials and medical subordinates." Surgeon-Major G. Emerson (witness No. 86) has had sixteen years' service, seven of which have been in civil employ. He remarked: "I have never seen dysentery caused by it, but there is no doubt that bronchitis and asthma are to a great extent due to the use of charas and ganja." On cross-examination, the witness said: "My opinion in regard to moderate use of ganja and charas is that evil effects might be produced in certain cases even by moderate use, but as a rule not............I should not be prepared to attribute to the moderate use of these drugs any further evil effects than to the moderate use of tobacco. I should like to transfer my remarks now to answer No. 46, which deals with the excessive use."

Twenty-four assistant surgeons were examined. Witness No. 109 stated: "I have had to treat a few cases of chronic bronchitis and asthma in which charas smoking was the alleged cause. Charas smokers cough very much." On cross-examination the witness said: "I may say that I did not make enquiry as to whether the bronchitis or asthma was really due to charas, and as a fact people suffering from these complaints often take to charas for relief." Witness No. 105 stated: "Smoking causes bronchitis and asthma, but drinking (bhang) does not, and is beneficial in dysentery." On oral examination the witness stated: "The smoking of ganja and charas caused asthma and bronchitis within my own observation. I have found these diseases very prevalent among those who smoke the drugs to *excess*. The *moderate* use will bring about the same results in time, but I have no personal experience of this. It is not a fact that ganja smoking is a domestic remedy against asthma and bronchitis, but dhatura is so used." The witness then referred to two cases of asthma which he attributes to the drug. "Both these cases began with the moderate use, which developed into the *excessive before the effects* I have described came on. I have no experience of the moderate use causing such serious results, but I think it probable it could if long continued." Witness No. 96 does not mention any diseases as resulting from the moderate use. S. P. Roy (witness No. 120) is an M.B. of the Calcutta University and not in Government employ; he is Municipal Analyst, Allahabad. His evidence is to the following effect: "Cases of chronic bronchitis and bronchial asthma and dysentery are too numerous to be cited. It is a popular notion, and I believe well founded in Bengal, that the habitual ganja smokers suffer from bronchitis and die ultimately from bloody stools." On cross-examination the witness stated: "I have never seen any ganja smokers of long standing who do not suffer from bronchitis and bronchial asthma, and in making this statement I do not confine it to my professional observation. I have not noticed that dysentery is so commonly connected with the hemp drugs. I have heard of ganja being smoked for the relief of asthma, and I have tried the extract of *Cannabis indica* for it without good results." Assistant Surgeon Subhan Ali (witness No. 98) is an M.R.C.S. and L.R.C.P. of London, and stated that ganja and charas cause bronchitis and asthma. Witness No. 103 states: "Ganja and charas very often produce asthma and bronchitis and sometimes dysentery, but one

chillum a day would not do so." Assistant Surgeon Hari Lal (witness No. 104) differentiates between the moderate use of bhang and ganja and charas. Bhang the witness considers does not cause dysentery, bronchitis, or asthma; ganja and charas impair the constitution slowly and cause bronchitis and asthma. Isan Chandar Roy, M.B. (witness No. 127), is a private practitioner. He stated: "In some persons moderate use does not produce noxious effects. But in certain persons, especially those who are predisposed or whose particular organs are already weakened, may have their digestive organs impaired, dysentery, bronchitis, or asthma being produced." Witness No. 107 considers that, provided good food be obtainable, the moderate use does not cause asthma or bronchitis. Witness No. 101 stated that dysentery is not caused, but bronchitis and asthma may result from habitual use of ganja and charas. Witness No. 99 stated that all these diseases are produced. Witness No. 100, on the other hand, made a diametrically opposite statement, *viz.*, that none of these diseases are produced. Manohar Pershad Tewari (witness No. 130) was formerly in Government service, but is now a private practitioner for the last eight years. He considers that the use of any of these drugs, except bhang, does cause dysentery, bronchitis, and asthma. On oral examination, the witness stated: "I have had four or five, or at most ten, patients a year who came before me in my private practice who were in the habit of using intoxicants. Of these, the most, up to eight, are consumers of hemp drugs. The other consumers of hemp drugs referred to were suffering from diarrhœa, dysentery, dyspepsia, bronchitis, asthma, and hæmoptysis. I attributed these to the hemp drugs. These people were all habitual consumers, and they themselves said that they were consumers, and that they could not get enough of the drug, and that made them ill, or they were indulging to excess and had not sufficient nourishment, *i.e.*, rich food, which is required in the case of a consumer. *These are the reasons why I conclude that these diseases were due to the drugs.* In all cases of the above-mentioned diseases, when the consumption of these drugs was discovered, the disease was assigned to these drugs if no other cause—*e.g.*, the prevalence of malarial fever—was discoverable. There were no doubt other consumers of hemp drugs who came before me beyond the average of eight a year, but I cannot say how many, as no enquiry was made about their habit, as it had nothing to do with their disorders." Witness No. 97 considers that while the moderate use of bhang produces no noxious effects, the use of charas and ganja does in the long run. Witness No. 112 stated the drugs do not cause bronchitis, asthma, or dysentery. Assistant Surgeon Man Mohan Das (witness No. 94) has been in Government service for 16 years; he has served in Bengal, Madras, and the North-Western Provinces. He stated that the habitual moderate use of bhang causes no noxious effects. "The moderate use of charas and ganja has some injurious effects....... But the evil effects of charas and ganja appear to be exaggerated. In fact, they are all due to excessive doses of the drugs. There are hundreds among Kahars, Malhas, and other lower classes, and even among the higher classes, who with a habitual moderate dose of charas or ganja keep their health well and live a long life, and it does not affect their moral or mental condition. But it is difficult for a ganja or charas smoker to keep within moderate limits. In most cases, say about three-fourths of the smokers will go to excess, and then all the evil effects will follow." On cross-examination, the witness admitted that his statement regarding three-fourths of the moderate consumers going on to excess was an exaggeration, and said: "I should now say that the proportion of consumers who go to excess is about one-fourth." Witness No. 95 considers that habitual moderate consumers who can afford

nourishing food seldom suffer from any ill effects. Witness No. 111 stated that the habitual use of ganja or charas does not cause bronchitis, asthma, or dysentery, but cures these diseases. Witness No. 106 gave no information of effects induced by the excessive use; with regard to the moderate use, he stated the effects are "not much marked," and that bronchitis and asthma might be caused after long use. Nobin Chandra Mitter (witness No. 148) is a retired assistant surgeon. He stated that during a period extending over thirty years he has treated thousands of persons habitually addicted to the use of the drugs, and has had ample opportunity of observing the effects. He is of opinion that the habitual moderate use, provided good rich food be procurable, does not induce any physical effects for a long time. The ultimate effects of prolonged use of bhang, though moderate, weaken the nervous system and occasionally gives rise to palpitation of the heart. Ganja under the same conditions he has known to have caused bronchitis and dysentery. Witness No. 108 has had over 23 years' experience, and has never seen any noxious effects induced by the moderate use of any of the drugs. Assistant Surgeon Munna Lall (witness No. 123), who has had twenty years' experience, and witnesses Nos. 110 and 102 give similar evidence.

Eight hospital assistants were examined. Jamal Khan, witness No. 113, is one of the old class of vernacular hospital assistants. He considers that daily use of the drugs in moderate quantity induces noxious effects. On oral examination he stated: "Out of one hundred ganja smokers who come sick to the dispensary, I find that seventy-five have chronic bronchitis or dysentery and twenty-five have some mental disorder." Witness No. 121 is described as a pensioner, native doctor, and health officer, Aligarh, and gave evidence to the following effect: "It is not injurious to the constitution otherwise than by causing thinness...............At the time of their use the man suffers from asthma and bronchitis; after leaving their use, he suffers from diarrhœa and dysentery." Witness No. 114 considers that no ill effects are induced. Witness No. 118, a retired hospital assistant, considers "that charas and ganja alone produce bronchitis and asthma, and bhang does not; none produce dysentery." Witness No. 119, another retired hospital assistant, replies to the question in precisely the same language and to the same effect. Witness No. 115 states the drugs do not cause dysentery, but bronchitis and asthma result from continued use. Witnesses Nos. 116 and 117 state that charas and ganja cause bronchitis and asthma; the latter witness states he is not aware whether dysentery is produced or not.

Fifty-two native practitioners were examined, of whom 26 failed to discriminate between the moderate and excessive use of the drugs. Their replies are not further considered. Three gave no reply. Witness No. 122, of over 15 years' experience, considers that no ill effects are induced. Witness No. 124 speaks only of bhang, and considers that it does not injure the constitution; he is silent, however, as to any alleged physical ill effects. Witness No. 125 is a hakim, and considers that ganja and charas produce bronchitis and asthma. Witness No. 126, a private medical practitioner, gives similar evidence. Witness No. 164, a hakim, stated that bhang causes no injury, but the moderate use of ganja and charas causes bronchitis, asthma, and dysentery. Witness No. 165, a hakim, remarked: "Injures soul and body, impairs semen, and impairs digestion no doubt." Witness No. 167, a hakim, considers that use causes dysentery, bronchitis, and asthma. Witness No. 132, a vaid, considers that ganja

and charas produce asthma. Witness No. 134, a private medical practitioner, considers the drugs injurious to the bowels and lungs. On cross-examination he stated : "There would be no harm to speak of if a man continued to be a moderate consumer of ganja or charas. But I think it difficult to keep the habit within bounds." Witness No. 136 stated: "Unless used as a digestive, causes asthma, deafness, and thinness." Witness No. 137 stated that ganja and charas (among other evils) cause "asthma to those who are weak." Bhang has no injurious effects unless taken in great excess. Witness No. 170, a native physician, stated that "habitual consumers do not feel any physical, mental, or moral injury. They neither feel pain nor ever have cough." Witness No. 171 considers that bhang produces no noxious effects, but that ganja and charas cause dysentery, bronchitis, or asthma. Witness No. 172 states that ganja or charas may cause dysentery and asthma; bhang is less harmful. No reply is given to the question dealing with excess which is apparently not distinguished from the moderate use. Witness No. 143 considers that charas and ganja produce "various diseases." Witness No. 146 does not deal with the moderate use. Witness No. 147 considers that bhang and charas are both injurious. "Bhang impairs the appetite in the end and charas causes bronchitis and asthma." Witness No. 173, a hakim of twenty years' experience, replied that "ganja often brings on bronchitis and asthma, and charas produces inflammation of the stomach and liver. None of them, however, has been found to cause dysentery." Witness No. 149 considers that bronchitis and asthma are produced. Witness No. 151 stated that ganja produces bronchitis and asthma, but not dysentery. Witness No. 152 stated that the use of charas and ganja causes cough and asthma. Witness No. 153 stated that ganja and charas give rise to a number of diseases, "especially to complaints of the stomach, lungs, brain, liver, bowels, etc." Witness No. 174 considers that the use of ganja and charas causes bronchitis and asthma. Witness No. 160 stated that, in addition to bronchitis and asthma, dysentery is also caused. Witness No. 158 considers bhang to be harmless, but that charas and ganja cause dysentery, bronchitis, and asthma. Witness No. 159, a vaid, stated that "ganja and charas weaken the heart, dry the constitution, and create lung diseases."

Punjab.

503. In the Punjab, Surgeon-Major J. A. Cunningham, witness No. 35, of over 12 years' service, stated that charas and ganja smoked cause chest affections, but not dysentery. Surgeon-Major Dennys, witness No. 34, stated that "charas smokers, even in moderation, are generally emaciated and in poor health, and are depraved creatures both mentally and physically. This is not the case with moderate consumers of bhang as far as I have been able to gather." The witness does not mention any connection between the use of the drugs and chest affections or dysentery.

Of the assistant surgeon and qualified private practitioner class eight were examined. Witness No. 48 is an L.M.S. and a private practitioner. He stated that "charas and ganja always bring on bronchitis and asthma if very large quantities are smoked. It brings on dysentery also." A perusal of this evidence indicates that the witness has mixed up the effects induced by moderate and excessive use of the drugs. Assistant Surgeon Jai Singh (witness No. 47) considers that the use of the drugs does not seem to cause bronchitis, asthma, or dysentery,

but rather cures them. Witness No. 39, also an assistant surgeon, stated that the use of bhang is probably quite free from noxious effects, but abuse of charas brings on bronchitis and asthma. Assistant Surgeon Rahim Khan (witness No. 37) is Superintendent, Medical School, Lahore, and has had 33 years' residence in the Punjab, and has been connected with the out-patient department, Medical College Hospital, for that period. He stated: "There are no bad after effects from bhang, but even the moderate use of charas brings on chest affections." Cross-examined as to the meaning the witness attached to *moderate*, he replied: "I call ten or twelve *chillums*, costing one or two annas, in the 24 hours moderate use. I know of no more moderate use than that. I know of no case of a man using only one or two *chillums* a day. I would call a man taking one or two annas' worth a day a '*charasi*'." It is clear that this witness knows nothing of the moderate use. Assistant Surgeon Mehr Chand (witness No. 40) stated that the moderate use of bhang produces no noxious effects, while charas, if even used moderately, brings on bronchitis and asthma, general irritation of the respiratory organs, indigestion, and dysentery. On cross-examination the witness said: "As to dysentery, I saw a case of a man who said he was a charas smoker, and took an excessive dose, and it brought on dysentery. I had doubt as to this being the cause. But I think charas may injure the digestion and predispose to diarrhœa or dysentery. I have not enough of cases to be able to say that the drug really produces dysentery. I am not certain. But I have had one or two allegations as to this being the cause, and I had no other cause. I ought to say rather 'it may produce' than 'it does produce dysentery.'" Assistant Surgeon Bhagwan Dass (witness No. 36) is Civil Surgeon of Jhang, and has nearly 25½ years' service. He stated that charas or ganja smoking caused indigestion and diarrhœa and chronic bronchitis. On oral examination the witness stated: "My personal experience of the effects of the drugs is based on my dispensary practice alone. In my social or domestic life I have no knowledge of moderate or excessive consumers.................. I have seen five or six cases of chronic bronchitis in people addicted to hemp drugs. I cannot say that it was due to hemp drugs solely. I have also seen several (say about twenty) cases of indigestion and diarrhœa. But here again I cannot say that they were solely due to hemp drugs, but simply that the patients were consumers. These are all the diseases I have seen attributable to hemp drugs. I have never seen a case of dysentery or asthma which I attributed to hemp drugs, though I have seen both in consumers. *My reason for not attributing these diseases to hemp was that other people also suffer from these diseases equally.*" Witness No. 41 did not ascribe any ill effects to bhang, but stated that bronchitis and asthma are often met with in consumers of charas. Witness No. 38 does not discriminate between the moderate and excessive use.

Three hospital assistants were examined. Witness No. 42 considers that charas smoking causes asthma. Witness No. 43 considers that noxious effects are induced by moderate use of the drugs. Hospital Assistant Karm Elahi (witness No. 44), of 25 years' service, considers that moderate use of the drugs to some extent produces noxious effects; and added: "I have not seen a single case of dysentery caused by the practice: of course cases of cough and asthma."

Seven native practitioners were examined, of whom three failed to discriminate between moderate and excessive use. Witness No. 51 stated that charas

causes asthma and bronchitis, but not dysentery. Witness No. 52 stated that "charas, of course, causes loss of appetite and bronchitis and asthma." Witness No. 53 merely stated: "The mischief is done by charas and ganja." Hakim Ghulam Nabi, of Lahore (witness No. 54), of twenty years' experience, stated: "I have not found even a single person during the last twenty years who complained of these drugs. There are more *takias* outside the Mochi Gate, Lahore, than in any other parts of the city which are reserved for the consumption of such drugs; and as the resorters to these *takias* generally come to me for treatment, and as none of them has during the last twenty years complained to me of having suffered from any disease in consequence of using bhang or charas, it shows that the moderate use of these drugs is harmless."

Central Provinces.

504. In the Central Provinces three commissioned officers, one Honorary Surgeon-Major, and two senior apothecaries were examined. All these officers are of long service and considerable experience. One, an officer of forty years' service, did not discriminate between the effects induced by moderate and excessive use of the drugs, and his replies to questions dealing with the moderate use are consequently valueless. One witness stated that the moderate use of ganja and bhang does not ordinarily produce any noxious effects, but that ganja sometimes causes chronic catarrh. A second witness stated that no evil effects are induced; then added that bronchitis and asthma may be caused by ganja smoking, but not dysentery. Surgeon-Major Quayle (witness No. 37), who had resided four years in a district where the drug is extensively cultivated, and where it is easily procurable in the adjoining Native States, alleged that he had no evidence that the moderate use of the drug produces any noxious effects—physical, mental, or moral. Surgeon-Lieutenant-Colonel McKay (witness No. 36), after twenty years' service in the country, gives no reply to the Commission's questions dealing with the effects of moderate or excessive use of the drugs. Brigade-Surgeon-Lieutenant-Colonel Gaffney, after 25 years' service as a Civil Surgeon in the Central Provinces, stated: "I do not think the moderate use produces any of these ill effects."

One assistant surgeon was examined in the Central Provinces, a man of 22 years' service, who was of opinion that, while the moderate use of bhang would not cause bronchitis, dysentery, or asthma, these remote effects might be induced by ganja.

One hospital assistant who was examined stated on cross-examination: "I have never seen an asthma, bronchitis, or dysentery case arising from ganja." Another pensioned hospital assistant was of opinion that the moderate use of ganja, charas, and bhang does produce noxious physical, mental, and moral effects; ganja causing dysentery, bronchitis, and asthma; bhang making a person unusually fat, affecting the urinary system, and causing bronchocele and hydrocele. One *vaid* was examined, 55 years of age, who had known hundreds of ganja smokers, and had never known a case in which it did any harm. He had himself been a steady ganja smoker for thirty years, consuming six to eight *chillums* daily.

Madras.

505. In Madras twenty commissioned and uncovenanted officers, of whom eleven either failed to reply or did not discriminate between the effects of moderate and excessive use, were examined. Surgeon-Major King (witness No. 85), nineteen years' service, sixteen

of which have been spent in civil employ, stated that in the habitual moderate smoker bronchitis is frequent. Cross-examined as to the basis of his observation of the general effects induced by the drugs, he stated : "I have known the moderate use in cases of sepoys and one private servant.......Besides the above direct observations, I have derived general impressions.......My general impression is based upon the fact that persons alleged to have been ganja smokers have presented these characteristics, but I have not specially inquired into the truth of the allegation that they were ganja smokers. They were pointed out as notorious ganja smokers. I did not discriminate in these cases between the moderate and excessive use because I was not called upon to do so." Surgeon-Major O'Hara (witness No. 93) stated that apparently no ill effects are caused, and that he has no information regarding specific affections alleged to be induced by the drugs. Surgeon-Major Sturmer (witness No. 99), of nearly nineteen years' service, said regarding effects of moderate use: "In time, I believe, it leads to mental and moral degradation." Cross-examined as to the basis of his information, the witness said : "I have never been into the question of ganja. I have never seen it scarcely. My first sentence (the one quoted above) is based on what a ganja smoker said. He said: 'It is a bad thing. I should like to leave it off, but I cannot.' I have really no experience as to the effects of either moderate or excessive use." Surgeon-Major W. F. Thomas (witness No. 96), of fifteen years' service, only three of which have been passed in civil employ, stated that users of the drugs suffer from dysentery, bronchitis, and asthma. On cross-examination the witness said: "I had to treat three cases of ganja poisoning. These men drank liquor and indulged in ganja. In all these cases there was congestion of the lungs present........These are the only three cases in which the evil effects of the drug have come directly under my notice. The symptoms in all three cases were the same, and for that reason I concluded the pulmonary affection to be the result of the drug. I have learnt from enquiry from medical subordinates and people in villages that dysentery, bronchitis, and asthma result from the drug. I have no personal experience on the point." Surgeon-Lieutenant-Colonel Hyde (witness No. 86) stated that, so far as he knew, no ill effects were caused. Surgeon-Major Lancaster (witness No. 90), twenty years' service, nineteen of which have been passed in civil employ, in his oral examination said: "I have had no opportunity of noticing the effects of the moderate use of hemp drugs; they have not come before me." Surgeon-Major Pemberton (witness No. 98), of fifteen years' service, and in civil employ continuously since 1885, stated that evil effects are induced, but asthma is relieved, and bronchitis and dysentery are not caused. Surgeon-Major N. Chattarji (witness No. 88), of nearly seventeen years' service, nearly all in military employ, stated: "It does not produce any particular disease except a peculiar cough, the result of a kind of chronic bronchial catarrh." On cross-examination the witness said : "I cannot in the case of any sepoy attribute thinness or cough to ganja, for I cannot be certain. I have no proof........... What I have said in my written answer about thinness and cough is my impression; but I could not assert it about any particular case." Civil Apothecary A. Wells (witness No. 105) has about nine years' service. He stated that bronchitis, asthma, and dysentery are not caused by the drugs, but relieved by them. Dr. K. J. Naidu (witness No. 106) stated that no ill effects are caused. Surgeon-Captain C. Fearnside (witness No. 97) considers that the drugs "impair the constitution, causing weakness of the limbs and other tissues, and hence the drug has

to be taken to keep up the tone of these tissues. It causes indigestion in many." No information is given about any specific affections being induced. Surgeon-Major-General DeFabeck (witness No. 83) was Surgeon-General with the Government of Madras. He had served in Madras and Burma since 1857. On oral examination the witness stated: "My experience is that it is a very rare thing to meet with any case in which the hemp drug has caused evil effects on the health of the population. Apart from insanity, no evil effects have been brought to my notice."

Seven apothecaries and private practitioners were examined. Civil Apothecary T. M. Cheriyan (witness No. 100), of nine years' service, stated: "It causes bronchitis and asthma"; and he also referred to other evil effects. On cross-examination the witness said regarding effects: "All the statements made here are based exclusively on hearsay. *I have not seen any of these ill effects myself in my practice*...........I do not know of any case of illness that has come before me of any kind being due to hemp drugs." Civil Apothecary K. Vasudeva Rao (witness No. 101), of six years' service, stated, under the question relating to effects, that he was once called to see a bairagi who was a habitual smoker of opium and ganja, and that he was a ghostly skeleton of bones covered with skin. No other physical effects are mentioned. On oral examination the witness said: "I did not treat the bairagi; I only saw him once; and, apart from his own statement that he was an habitual smoker of opium and ganja, I learnt nothing whatever of his history. I cannot, therefore, judge whether his condition was due to other causes than the habits he confessed to." Civil Apothecary Mohammad Asadulla (witness No. 104) stated that the drugs caused bronchitis and other evil effects. Cross-examined, he said that he had "treated cases of asthma, bronchitis, and the like which have resulted from prolonged use of the drugs, but he could not recall any such cases." Civil Apothecary G. A. Vellones (witness No. 102) gave a negative reply regarding causation of specific diseases. Assistant Surgeon Saldana (witness No. 107) stated that "consumers say no noxious effects are produced so long as sufficient food is supplied." Civil Apothecary N. H. Daniel (witness No. 103) considered that evil effects were induced, including dysentery and bronchitis.

Thirteen hospital assistants were examined. Witness No. 119, a pensioned hospital assistant, considers that the habitual moderate use never produces any bad effects, or causes dysentery, bronchitis, or asthma. Witnesses Nos. 108 and 109 also gave a reply in the negative regarding specific diseases. Witness No. 111, of 22 years' experience, considers that the habitual consumer generally exceeds moderation; no specific diseases are mentioned as being caused by moderate use. Witness No. 113 stated that, while bhang does not produce any noxious evil effects, smoking ganja does. Witness No. 114 stated: "It produces noxious effects." Witness No. 115, of thirteen years' service, on the other hand, stated: "I have not observed any noxious effects." Witness No. 116, of fourteen years' service, considers that, with the exception of a "kind of hoarse cough in ganja smokers," no noxious effects are produced by the use of bhang or ganja. The remaining witnesses either failed to reply or were not examined on the effects induced by moderate use.

Six native practitioners were examined. Witnesses Nos. 121 and 123 stated that the habitual moderate use of ganja or bhang does not produce any noxious

effects. Witness No. 135 stated: "It impairs the constitution by making the man lean; increases digestion, and removes dysentery and cough." Witness No. 124 stated: "The use of these drugs produces moral effects, physical and mental, only to those people who are accustomed to it, and not in any way distinctive." No. 125 stated: "No doubt it produces noxious effects. In the long run they were subjected to bronchitis, and their eyes became dark gradually." This witness fails to answer the question dealing with excessive use, and has not apparently discriminated between the two uses of the drug. The remaining witnesses failed to reply.

Bombay.

506. Thirteen commissioned medical officers were examined in Bombay, of whom three were examined only regarding asylum procedure in relation to insanity. Of the remaining ten, Surgeon-Lieutenant-Colonel McConaghy (witness No. 69) is an officer of nearly 25 years' service, fifteen of which have been passed in the Civil Department. He stated that the moderate use of bhang or ganja does not impair the constitution in any way. Surgeon-Major Kirtikar (witness No. 73) has served over sixteen years, eleven of which have been in civil employ. He stated: "I have not seen nor have I heard from any reliable source of dysentery, asthma, or bronchitis being traced to the use of hemp in moderation. European physicians use it for the *cure* of dysentery." Surgeon-Major Boyd (witness No. 67), of about seventeen years' service, of which three-and-a-half years have been in military employ, stated: "Neither have I known any cases where it caused dysentery, bronchitis, and asthma." Surgeon-Major Parakh (witness No. 66) does not refer to specific diseases being induced. In his paper he refers to "homicidal insanity" being due to the moderate use, but in his oral examination he stated that probably he had in mind cases due to excessive use, and his reply should be taken as referring to the *excessive use*. Surgeon-Lieutenant-Colonel Bartholomeusz (witness No. 68), of over twenty years' service, stated: "I have not seen a sufficient number of cases to enable me to give a definite opinion;" and he does not deal with excessive use. Brigade-Surgeon-Lieutenant-Colonel J. Arnott (witness No. 65), of about twenty-five years' service, replies to the question dealing with effects of moderate use by entering the word "yes" four times without explanation; and he does not answer the question which treats of excessive use. Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie (witness No. 64), of about twenty-five years' service, stated that he knows nothing about the subject. Surgeon-Colonel D. Hughes (witness No. 74), of twenty-seven years' service, of which fourteen were in military employ, is Principal Medical Officer in Bombay, Deesa and Aden districts. He stated: "I think the smoking of charas causes asthma and bronchitis, as I well remember cases of these diseases in the 24th Bombay Infantry which were ascribed by the hospital assistant and the men's comrades to charas smoking, and which recovered in hospital quicker than cases due to ordinary causes." On cross-examination the witness said: "I remember that when the yearly inspection for pension took place...... a number of men, of service only just long enough to earn pension, came up suffering from bronchitis and asthma. They were generally weak and broken down in appearance, but this may have been caused by voluntary starvation...... It was explained to me that they owed this illness to charas smoking. I did not certify in any case that the illness of a man who was granted pension was due to charas. I am bound to state that an applicant's disease was not aggravated by vice or intemperance, but I took no notice of the use of the drug in

any of these cases, because I did not attach sufficient importance to the statements made to me, and was not sure that they were correct." This evidence, rejected at the time, is the only basis of the opinion now expressed. Surgeon-Major-General Turnbull (witness No. 63), of 33 years' service, Surgeon-General with the Government of Bombay, stated: "I have no personal experience of the effects of the hemp drugs on the people." Surgeon-Major D. C. Davidson (witness No. 71) stated: "So far as I can learn, the moderate use of ganja in smoking does not appear to be either physically or mentally injurious, generally speaking."

Eleven officers belonging to the assistant surgeon and qualified private practitioner class were examined. Witness No. 76 stated: "I think it does not cause dysentery, bronchitis, or asthma." Witness No. 90 stated: "It does produce dry cough eventuating in bronchitis or asthma, but it does not seem to produce dysentery, so far as my experience goes." Witness No. 91 gives a negative reply to ill effects being caused by moderate use. Witness No. 79 stated: "I have not noticed any other disease to result from occasional or moderate use of ganja or bhang in any form." The disease referred to was *general atrophy*, and death from the use of majum. Witness No. 77 stated that no ill effects are produced. Witness No. 78 stated that he has had no opportunity for observing effects. Witness No. 82 stated that injurious effects are produced. "It is a popular belief amongst the ganja smokers that a long-continued habit produces diarrhœa and dysentery, unless these evils are counteracted by an abundant supply of wholesome food, with especially a liberal allowance of ghee and other oleaginous materials. My experience supports the above made statement." Witness No. 80 stated that no ill effects are produced. Witness No. 81 stated that the use does not cause bronchitis or dysentery. Witness No. 97 stated: "It causes dysentery and other derangements of the bowels;" but the witness fails to discriminate between the effects of the moderate and excessive use. Ismail Jan Mahomed, L.M.S., (witness No. 96), stated: "Many cases of chronic diarrhœa and dysentery, as well as chronic bronchitis and asthma, are seen in those who use ganja." The witness, however, does not answer the question dealing with results of excessive use, and does not discriminate between the two uses of the drug.

Seven witnesses of the hospital assistant class were examined. Witness No. 83, of nearly 30 years' standing, stated: "I have not sufficient information to answer this question." Witness No. 84 does not discriminate between the moderate and excessive use of the drugs. Witness No. 85 stated: "I do not think that habitual moderate use of any of these drugs produces any noxious effects." Hospital Assistant Sudashio Waman (No. 86), of twelve years' service, stated that the habitual moderate use of the drug in certain constitutions produces noxious effects, causes bronchitis and asthma, but not dysentery. On cross-examination the witness stated: "The constitutions affected injuriously by the moderate use of hemp drugs are nervous and weak constitutions. In small quantities the drugs would do no harm to a healthy person." Witness No. 87 stated that ganja causes bronchitis and occasionally asthma. Witness No. 88 stated that no ill effects are caused. Hospital Assistant Purson Singh (witness No. 89) has had nearly 25 years' service in the Medical Department. He stated: "It causes chronic bronchitis and asthma, but cures dysentery."

Eight witnesses of the unqualified native practitioner class were examined. Witness No. 111 is a druggist and chemist, and stated that no ill effects are

produced. Witnesses Nos. 98 and 99, vaidyas, gave similar evidence to the last witness. Witness No. 100, also a vaidya, stated no ill effects are caused by the moderate use of bhang; but he does not express any opinion on the effects caused by moderate use of ganja. Witness No. 92 is described as a medical practitioner of 27 years' experience, and does not think that noxious effects are produced. Witness No. 93, also a medical practitioner, stated: "They do not cause dysentery, bronchitis, or asthma, but, on the contrary, do good to these diseases." Witness No. 94 does not reply. Witness No. 95, also a medical practitioner, stated: "I have not met with any cases in which the habitual moderate use of bhang has produced any noxious effects, ... but I believe the habitual moderate use of ganja and charas does produce some noxious effect physically, mentally, and morally."

507. Three commissioned officers were examined in Sind. Brigade-Surgeon-Lieutenant-Colonel J. F. Keith (witness No. 16) has had twenty-five years' service, of which 14 have been passed in Sind and 15½ in civil employ. He stated that a general negative may be given to the questions dealing with noxious effects from moderate use. Surgeon-Major Corkery (witness No. 17) stated that the moderate use of these drugs does not produce any immediate noxious effects; but if bhang is indulged in for a considerable period, it impairs the constitution and produces emaciation. "At first it acts as a digestive, but afterwards impairs it, giving rise to asthma and bronchitis, but not dysentery." Brigade-Surgeon-Lieutenant-Colonel Bainbridge (witness No. 15) has acted as Civil Surgeon for 26 years. He stated: "I have no evidence, but I should say that the habitual moderate use of any of these drugs is harmful."

Sind.

Four officers of the assistant surgeon class and one medical officer of health were examined. Witness No. 1 stated that no ill effects are produced. Dr. S. M. Kaka (witness No. 24) is medical officer of health at Karachi, and has practised there since 1884. The witness stated: "The habitual moderate use of ganja and charas acts injuriously upon the constitution physically, mentally, and morally." In cross-examination he stated: "It is difficult to draw a definite line between moderate and excessive use. They merge into one another." Witness No. 19 stated: "I am of opinion that moderate use of *subzi* does not produce any noxious effects—physical, mental, or moral." And Surgeon J. E. Bocarro (witness No. 20) stated: "I cannot say this of bhang, but charas and ganja, even in moderate doses, tend to weaken the bodily frame..................... As regards causing the diseases mentioned, I have not a single case on record to warrant such a conclusion so far as bhang is concerned, but several of my cases indicate that the continued use of charas and ganja do cause dysentery and bronchitis. I have no history regarding asthma." Witness No. 21 stated that the habitual moderate use of the drugs does not cause dysentery, bronchitis, or asthma.

In Sind two hospital assistants and no private practitioners were examined. Witness No. 22 stated no ill effects are caused. Witness No. 23 stated that the use "causes bronchitis and shortness of breath."

508. Eight commissioned officers were examined in Burma. Surgeon-Major Thomas (witness No. 42) stated that no ill effects were produced by moderate doses. Surgeon-Major Dantra (witness No. 40) has had 17 years' service, nearly the whole in Burma, and

Burma.

s tated : "It neither causes dysentery nor asthma, but it produces cough." Surgeon-Major P. W. Dalzell (witness No. 41) stated : "I am not aware that it causes either dysentery, bronchitis, or asthma." Surgeon-Lieutenant-Colonel Mukerji (witness No. 39) has 26 years' service, and stated : "I have seen several habitual moderate smokers who did not suffer at all either physically, mentally, or morally. Others have injured their constitutions by use of ganja and charas." Surgeon-Ca ptain Castor (witness No. 44) stated : "Not so far as I know. Causes oss of appetite." The remaining witnesses do not reply to the question.

Three assistant surgeons were examined. Witness No. 46 stated : "Habitual moderate use has apparently no noxious effect." Assistant Surgeon Moonshi (witness No. 45) has 21 years' service, and stated : "I have known habitual moderate consumers of these drugs to enjoy robust health." According to the witness, the drugs do not cause bronchitis, asthma, or dysentery ; "on the contrary, asthmatic people often resort to it to allay their sufferings. Immoderate use causes gastro-intestinal irritation." The third witness was not examined regarding effects of moderate use.

One hospital assistant was examined (witness No. 48), who stated : "The moderate use does not cause dysentery and bronchitis." No private practitioners were examined.

509. Five commissioned and two uncovenanted officers were examined in the smaller provinces, six in Berar, and one in Ajmere. Surgeon-Major Swain (witness No. 18) has had 17 years' service. He stated : "It does not cause dysentery, diarrhœa, bronchitis, or asthma." Surgeon-Major Roe (witness No. 19) stated : "It is said to cause bronchitis and asthma, but not dysentery." Dr. O. W. Jones (witness No. 21) stated : "The moderate use of ganja or bhang is in no way detrimental to the consumers ; on the contrary, it is beneficial. I give this as my experience and as the experience of men who are in the habit of using ganja in moderation for periods varying from 10 to 12 years." Surgeon-Captain Morrison (witness No. 22) stated : "Eventually evil effects are caused. Ganja smoking has caused asthma." Dr. W. T. Montgomery (witness No. 23) stated that "even the habitual moderate use of these drugs affects the physique, mind, and morals of the consumer." The witness does not reply to the question dealing with effects of excessive use, and has probably really not discriminated between the two uses of the drugs. The Ajmere witness does not reply.

Berar, etc.

Two officers of the assistant surgeon class were examined. One stated (witness No. 30) that the constitution is weakened and debilitated, and that smoking produces cough and asthma in some cases. The other witness does not reply.

Four officers of the hospital assistant class were examined. Witness No. 27 stated : "Yes ; it does to some extent produce noxious effects, the excessive use causing bronchitis, asthma, and dysentery." Witness No. 28 stated it produces bronchitis. Witness No. 24 stated that first no ill effects are caused, but gradually the dose has to be increased, with the result that "dysentery, bronchitis, rheumatism, loss of memory, epistaxis, softening of brain, etc., set in, and the person becomes so sick that he finds his life a burden"................Witness No. 25 stated : "Chronic bronchitis is caused by ganja smoking. I have not seen dysentery or asthma result from ganja or bhang."

510. The medical evidence which has thus been analysed very clearly indicates in the opinion of the Commission that when the basis of the opinions as to the alleged evil effects of the moderate use of the drugs is subjected to careful examination, the grounds on which the allegations are founded prove to be in the highest degree defective. A large number of medical witnesses of all classes ascribe dysentery, bronchitis, and asthma to the moderate use of the drugs. An equally representative number give a diametrically opposite opinion. The most striking feature of the medical evidence is perhaps the large number of practitioners of long experience who have seen no evidence of any connection between hemp drugs and disease, and when witnesses who speak to these ill effects from the moderate use are cross-examined, it is found that (*a*) their opinions are based on popular ideas on the subject; (*b*) they have not discriminated between the effects of moderate and excessive use of the drugs; (*c*) they have accepted the diseases as being induced by hemp drugs because the patients confessed to the habit; and (*d*) the fact has been overlooked that the smoking of hemp drugs is recognized as a remedial agent in asthma and bronchitis. A few witnesses incidentally refer to personal idiosyncrasy as perhaps being a factor in rendering some consumers of the drugs less tolerant and more liable to be affected by them even when used in moderate quantity. This view the Commission are prepared to accept; but for the vast majority of consumers, the Commission consider that the evidence shows the moderate use of ganja or charas not to be appreciably harmful, while in the case of moderate bhang drinking the evidence shows the habit to be quite harmless. As in long-continued and excessive cigarette smoking considerable bronchial irritation and chronic catarrhal laryngitis may be induced, so, too, may a similar condition be caused by excessive ganja or charas smoking; and to the œtiology of bronchial catarrh and asthma in ganja smokers the Commission have already referred. The direct connection alleged between dysentery and the use of hemp drugs the Commission consider to be wholly without any foundation. In the case of bhang there is nothing in the physiological action of the drug which could in any way set up an acute inflammation of the large intestine resulting in ulceration. On the contrary, it is well known that hemp resin is a valuable remedial agent in dysentery. As regards ganja or charas smoking inducing dysentery, even assuming that the products of the destructive distillation of the drugs directly reached the intestines, there is evidence that those products, when condensed and injected into a cat's stomach, failed to induce any inflammatory process. The connection, therefore, between hemp drug smoking and dysentery appears even remoter than in the case of bhang drinking and that disease, and cannot be accepted by any stretch of the imagination as even a possible direct cause of dysentery.

Summary of the evidence.

511. Hitherto the Commission have only considered the *direct* action of hemp drugs when used in moderation in inducing certain marked conditions, but their *indirect* action when taken in excess must also be briefly considered. First, as regards the indirect action of bhang in inducing bronchitis, Dr. Prain may be quoted. He writes: "Here as in so much else associated with hemp some misunderstanding has arisen among Natives and Europeans alike, and it has been supposed that the use of hemp causes the bronchitis. As a matter of fact, cases of this 'bronchitis' cold weather cough would seem to be rather less common among

General effects of excessive use.

siddhi tipplers than among other people of the same class. What does happen is that digestion is impaired, the daily consumption of such a dose of narcotic overburdens the alimentary and eliminating systems, the man's appetite goes, and the food he takes is not properly absorbed. The symptoms mentioned are the signs of this indigestion, and the impaired vitality which renders the system unable to throw off an illness is its results." With lowered vitality due to any cause, it must be obvious that an individual is more liable to be affected by vicissitudes of weather and bad sanitary surroundings than a person in normal health; and it may be accepted that excessive consumption of any intoxicant does tend to lower vitality. Excessive consumers of the drug are therefore probably more liable to bowel-affections. As regards the indirect effects of the drug when smoked, it is likely that the excessive consumers also commit excesses of other kinds, while the excessive smoking also tends to diminish the appetite: the money which should be spent for the purpose of procuring wholesome and nutritious food—which a large number of witnesses state to be essential if evil effects are to be warded off—is used for obtaining the drugs. It is not surprising that under such conditions the excessive consumer should be more liable to bowel-affections, diarrhœa, or dysentery than a non-consumer.

A few witnesses have referred to sudden death following a prolonged pull at a ganja or charas *chillum*. In the cases which the Commission have attempted to sift, the cause of death has not been satisfactorily explained. There are, however, diseased conditions in which sudden death is not uncommon, and in the cases referred to autopsies do not appear to have been conducted. The Commission consider, however, that a very prolonged pull at a *chillum* might possibly cause spasm of the glottis, producing asphyxia, or the products of the destructive distillation of the resin might cause paralysis of the respiratory centre or of the heart. Alleged cases of this kind are very few indeed, and they have not been carefully examined. They need not detain the Commission further. Leaving the physical effects, the Commission now proceed to discuss the mental effects of the drugs as shown in the alleged causation of insanity.

CHAPTER XII.

EFFECTS—MENTAL.

Insanity.

512. The Commission have attached considerable importance to the inquiry regarding the connection between insanity and hemp drugs because this is the part of the subject of which most has been heard in the past. There has been undoubtedly a popular impression that hemp drugs do cause insanity. There are not a few witnesses who deny this,—who say that they have never seen a consumer of the drugs insane, and do not believe that the drugs ever produce insanity. But the much more common impression is that, at all events if used to excess, the hemp drugs may, and often do, produce insanity. Some few witnesses, generalising from a most limited experience, go so far as to say that insanity is the inevitable result of the use of the drugs. There exists undoubtedly a popular impression which has come down from many generations that there is some connection between hemp drugs and insanity. Besides this popular impression, there has been great prominence given to asylum statistics as affording some tangible ground for judging of the effects of hemp drugs. Over and over again the statistics of Indian asylums have been referred to in official documents or scientific treatises not only in this country, but also in other countries where the use of these drugs has demanded attention. Other alleged effects of the drugs have attracted but little attention compared with their alleged connection with insanity.

Popular impression.

513. The popular impression on the subject is capable of very simple explanation. It is undoubtedly a very difficult matter to decide as to the cause of insanity in any case. And it cannot be expected that the popular view of the cause in any particular case should be accepted as accurate. There may be good ground for the popular opinion that insanity is caused by hemp drugs. That question may be deferred for the present. But there can be no doubt that in any particular case this view of causation must be accepted with caution. To ascertain the true cause requires a thorough knowledge of the history of the patient and a scientific capacity for judging of that history. The unscientific or popular mind rushes at conclusions, and naturally seizes on that fact of the case that lies most on the surface. Any exciting cause is more easily apparent to the casual and unscientific observer than a predisposing cause could be. The former is nearer to the effect in point of time, and is naturally more readily associated with it. Similarly, any physical cause is more easily apparent to such an observer than a moral cause would be. The former lies nearer the surface, and any physical fact that seems a possible cause is naturally accepted. Again, an intoxicant would naturally be more readily accepted than other physical causes, because some of its effects as seen in ordinary life are very similar to the symptoms of insanity. This is, perhaps, specially the case with ganja: an excessive dose produces intoxication. Its first effect is the "disequilibration of the intellect," and the mental symptoms of hemp drug intoxication are very similar to those of insanity. Such physical symptoms as the casual observer would note are less marked perhaps in the case of ganja than with alcohol, while the mental condition is often that strange mixture of apparent clearness with manifest derangement of thought which is found in insanity, but not usually in alcoholic intoxication. It is only natural that drugs the intoxication of

which is seen to produce such symptoms should be readily accepted by the popular mind as a cause of insanity.

This popular idea has been greatly strengthened by the attitude taken up by Asylum Superintendents. They have known nothing of the effects of the drugs at all, though the consumption is so extensive, except that cases of insanity have been brought to them attributed with apparent authority to hemp drugs. They have generalised from this limited and one-sided experience. They have concluded that hemp drugs produce insanity in every case, or in the great majority of the cases, of consumption. They have had no idea that in the vast majority of cases this result does not follow the use. They have accordingly without sufficient inquiry assisted by the statistics they have supplied and by the opinions they have expressed in stereotyping the popular opinion and giving it authority and permanence. All this mass of popular and medical opinion demanded careful examination. The Commission have set themselves to take evidence from lay witnesses and to sift as far as possible the cases mentioned so as to ascertain the basis of the popular view. They have also examined medical men of all classes as to cases of the alleged connection between hemp drugs and insanity which have come before them in their practice, and have cross-examined them carefully in regard to these cases so as to see whether the grounds for the opinion formed in each case are adequate. Finally, they have very carefully considered the asylum statistics, and specially enquired into a large number of asylum cases. It has become apparent in the course of the inquiry that no satisfactory conclusion can be based on the individual cases reported by witnesses. As a rule, it is made manifest at once by cross-examination that the history of the patient has not formed the subject of careful inquiry; that the opinion is based on most inadequate data; and that little or no importance has been attached to the question of causation. The Commission have therefore been compelled to fall back on the asylums. This course seems clearly expedient on two grounds—firstly, that the asylum statistics and asylum experience have formed the principal basis of the opinion which calls for examination; and, secondly, that the asylum cases must form the best material for arriving at a conclusion. In its general effects the evidence of witnesses should not be ignored; but it is impossible to say precisely what weight ought to be attached to it in regard to particular facts; and the main basis of any final conclusion must be the material supplied by the asylums which the Commission now go on to consider.

Difficulty of getting accurate information.

514. The facilities which exist in England for acquiring something like accurate knowledge of the cause of insanity in any particular case may be confidently regarded as much greater than those in India. Yet every work on insanity contains comments on the difficulty of arriving at the truth and the unsatisfactory nature of many of the statements recorded. The most important subject of inquiry in this connection is the history of the lunatic's family, so as to discover what (if any) hereditary predisposition to insanity there may exist. Regarding this, Dr. Blandford says ("Insanity and its Treatment"): "Statistics on this subject are valueless. One author attributes 10 per cent. of cases to this cause; another no less than 90. This arises from lack of information on the part of some friends and the wilful concealment of others, and also because some statisticians seek for insanity only, taking no account of other neuroses, such as epilepsy

or paralysis. If we make the attempt, we shall soon find how difficult it is to get an accurate account of the health of the father or mother and grandfather and grandmother of any one patient." On the wider subject of causation generally, Dr. Hack Tuke (Dictionary of Psychological Medicine; article "Statistics of Insanity") says: "As the Lunacy Commissioners adopt a classification of the causes of insanity which is fairly workable, and have collected together a large number of returns from English asylums, it is desirable to give the results here for what they are worth. As is well known, the entries made by the friends of patients in the statutory statement are extremely unreliable, and constantly confound cause and effect. The Commissioners state that they have not relied upon these, but upon statements verified by the medical officers of the asylum."

Asylum statistics.

515. If this be the case in England, how much more is it necessary in India to exercise caution in receiving statistics as to the causes of insanity, to examine carefully the source from which they come, and to rely only on those which have been carefully tested. The Commission in examining the statistics of the lunatic asylums soon found that they could not be regarded as trustworthy. They first of all enquired into a number of cases in the Dullunda Asylum (Calcutta), and ascertained generally the practice in regard to recording the cause in the asylum registers, and the character of the inquiry on which that record was based. What they learned there led them to distrust the asylum statistics. They determined to make a careful inquiry into all cases attributed to hemp drugs in one year, and to endeavour thus to ascertain how far the statistics were reasonably correct, and, if possible, also to arrive at some conclusion as to whether hemp drugs have any real connection with insanity. They fixed on the year 1892. They considered it for obvious reasons expedient to take the same year all over India; and this was the last year for which complete statistics existed when they began their inquiry. At the same time these statistics had been completed and printed before the proposal to have any inquiry into the effects of ganja had been made. The Commission decided to take up each of these cases of 1892 separately, and to inquire as fully as possible into its history.

Hitherto any opinion regarding the connection between hemp drugs and insanity which has professed to have any solid basis at all, or to be more than a vague impression, has been based on the figures contained in the annual Statement No. VII appended to the Asylum Reports. It is necessary to consider how far these figures supply any reasonable basis for a scientific opinion on the question.

The figures contained in that statement are compiled from the entries as to cause made in the asylum registers. The great majority of the Superintendents of Asylums have clearly stated that these entries are based on the descriptive rolls sent with the lunatics. They have not considered it necessary to enquire how far the descriptive rolls are likely to give trustworthy information regarding cause, how or by what agency that information is collected, or by whom it is supplied. It has been sufficient that it is sent to them officially, and that they have no opportunities of testing it. They have therefore accepted it. If the papers have been manifestly incomplete, they have been sent back to the Magistrate for completion. The practically universal rule has been to

accept the cause entered in the descriptive roll, and only to make enquiries in the asylum when no cause had been entered. It cannot be said that even this practice has been carefully and accurately observed. The copying of the entries is left to subordinates who sometimes use their own discretion. Thus Dr. McConaghy, Superintendent of the Poona Asylum, says: "The register is filled up by the assistant at the time of the lunatic's admission. According to my idea of asylum practice, the entries must be in accordance with Form C. If the cause is entered as unknown, it must be so shown in the register. No alteration would be made without the permission of the Magistrate." Yet of the six cases ascribed to hemp drugs in 1892, there was not one in respect to which the entry in the register corresponded with that of the descriptive roll as to cause, and there was nothing on record to explain the discrepancy in any case. Similarly, Dr. Macnamara, Superintendent of the Tezpur Asylum, says : "The cause is entered in the general register from the police statement, *i.e.*, from the descriptive roll. We have nothing whatever to do with it. It is entered by the Overseer in charge of the Asylum, and ought to correspond with the entry of the descriptive roll." As a matter of fact, eleven of the thirteen cases for 1892 showed entries regarding cause which did not correspond with the descriptive rolls; and of these 11, no less than 10 were made, not by the Overseer, but by his subordinate, the jemadar. Besides such errors as these, there are errors arising from carelessness in the mere copying of the register entries from year to year. These derive their importance from the fact that they must have been discovered had any attention been really given in the asylums to this matter of causation. A striking example may be given from among the old cases in the Rangoon Asylum. Moung Min Thay was admitted on 25th June 1871. There has been no improvement in his mental state. There are no papers in his case except an order from the Magistrate to receive the man "supposed to be insane." The original entry in the case book shows cause as "predisposing disease of the brain, exciting drinks, and smokes opium;" and it shows the duration as "probably from birth." It also shows that the man was epileptic. There is no mention of ganja. The register for 1885 (the first to show causation) shows "alleged duration" as "congenital," and "alleged cause" as "drink and opium smoking." The entry "congenital" is continued until 1892, when it is replaced by a "*Do.*" under the "Not given" of a previous case. In 1886 the "cause" similarly undergoes undesigned alteration. The word "drink" is replaced by "ganja;" and in 1888 the reference to "opium" is finally dropped. The case thus became a ganja case, and has been shown as such ever since. These all may be instances of exceptional carelessness, but as a general rule it cannot be said that these entries have been made with care. Superintendents have not attached much importance to them. It has been left to subordinates to do this work; and that work as a rule has not been carefully supervised. Speaking generally, however, Superintendents have desired that the entries in the register regarding cause should correspond with those in the descriptive rolls; and they have believed that their subordinates were making the entries on this principle.

Some few Superintendents have professed a different method, and have assumed some responsibility for the entries as to the cause of insanity in their registers. There are, however, only three Superintendents who held this office in 1892 who profess to have been to any appreciable extent independent of the

police statements or descriptive rolls. The first of these is Brigade-Surgeon-Lieutenant-Colonel Hooper, who says that his "practice has not been to enter the cause at once, but to wait until a diagnosis of the case has been made. Then, if the supposed cause, as shown in the Magistrate's statement, is not inconsistent with the diagnosis of the insanity, or with the information received from friends who may have come, or with statements made by the man himself if he recovers sufficiently, that cause is entered in the register." The part played by diagnosis in the determination of cause is, however, somewhat visionary; for Dr. Hooper says that there are no symptoms peculiar to hemp drug insanity except perhaps more speedy recovery, and that an accurate history is "absolutely essential; it is the only means by which you can arrive at a diagnosis." As to the statements of friends, Dr. Hooper seems to think that friends visit patients in the majority of cases. If this is so in Lucknow, his experience differs from that of Superintendents elsewhere. It is possible, however, that he may be mistaken, for it appears that enquiries from friends are "not ordinarily" made by him, but by the Deputy Superintendent. The statements of lunatics also appear from his evidence rarely to affect the entries. There is one point on which Dr. Hooper specially insists, *viz.*, that any fact established regarding heredity would exclude the ganja theory. Turning to the cases for 1892, it is found that there was one case in which the lunatic's brother was insane, and another where a direct ancestor was insane; but no notice was taken of these facts in determining cause, and the cases were entered as due to hemp drugs. It also appears that in 14 out of the 17 cases shown as due to hemp drugs, this cause is entered in accordance either with the entry in the papers regarding cause, or with that regarding the lunatic's habits. Of the remaining three cases, there is in one an alleged statement by the lunatic's brother (afterwards denied). In another the lunatic "recognizes bhang and makes contradictory statements as to its use." In the third, there is the statement of the lunatic himself while still insane.

The second Superintendent who states that he adopts exceptional practice is Brigade-Surgeon-Lieutenant-Colonel Keith of Hyderabad (Sind), who says that "the only ground, so far as I can remember, on which I would enter cause would be information of friends or the statement of the insane after he had recovered his wits." It is striking that of the 13 cases set down to hemp drugs in 1892, the cause as entered in the register corresponds in 10 cases with that entered in the papers sent with the lunatic. In the other three cases no basis for the entry of cause is given at all. In one case the Superintendent told the members of the Commission who visited the asylum that the entry was based on a statement made by the father; this the father now denies. In the other two cases, no such explanation was given by Dr. Keith to the members of the Commission; but that officer now says (probably on the authority of some subordinate) that these two lunatics used to ask for the drug in the asylum. No record of any such fact was found in the register. The Commission are unable in view of all that has been ascertained of these cases to attach much weight to these statements.

The third exceptional case is that of Surgeon-Major Dobie of Madras. In his letter of 20th October 1893 (*vide* Vol. II Appendices) Dr. Dobie said: "I am responsible for the entry of the cause as ganja in the first 14 cases [of 1892]. In no case have I entered it as a cause without such evidence as led me

to a reasonable belief that it was so." But in his evidence before the Commission on 22nd January 1894, this officer stated: "My reasonable belief as to cause was based on reading the papers and seeing whether they showed a probable cause of insanity, and on enquiry from the lunatic............I feel very little confidence in the diagnosis I have made ascribing these cases to hemp drugs."

Statistics are based on the descriptive rolls.

516. There is clearly no valid ground in the practice of these three Superintendents for modifying the general statement based on the frank admission of the great majority of the Superintendents that the entries regarding cause in the registers, and therefore the figures in annual Statement No. VII, have been based wholly on the descriptive rolls or similar papers received with the lunatics. This practice has, no doubt, become established owing to the following considerations. As already stated, many Superintendents have recognized these papers as practically the only material they had for determining cause. They have not had adequate opportunities for making enquiries themselves. They have had a general impression that the information supplied by Magistrates or police was as good as the Government required for statistical purposes, and they have accepted it accordingly. As a rule they have regarded this question of cause as one of little or no practical importance. The Government prescribed Statement VII, and pressed to have the columns filled up; and as a rule the orders were carried out in this somewhat mechanical way. Surgeon-Major Carruthers, Superintendent at Calicut, perhaps puts this view in the strongest terms when he says: "My position as Superintendent of the Lunatic Asylum requires me to take charge of insanes when they are sent in, and retain them until they are fit for discharge. I am simply keeper and incidentally medical attendant, and not responsible for any statements and certificates received with the patient so long as they are in order." The same view is, however, as clearly expressed by Brigade-Surgeon-Lieutenant-Colonel Hooper when he says: "I do not consider that the question of cause is one which affects the treatment of cases. My inquiries therefore into cause are of a statistical, not a practical, character. The result will not affect my treatment of the case." Even to an officer who sees that the knowledge of the cause may help him in the treatment of the case, responsibility for the accuracy of the returns is a very minor matter. Surgeon-Lieutenant-Colonel Leapingwell (Vizagapatam), for example, says: "The point, of course, is chiefly one of personal interest to me in the treatment of the case. An entry was made (in the particular case under discussion) on the papers. I omitted to alter the register." It is clear then that the medical officers in charge of asylums have not felt that they have been in any way responsible for the accuracy of the figures contained in annual Statement VII regarding causation of insanity; and that these figures derive no value from the fact that the statement bears the signature of a medical man; for their value practically depends entirely on the character of the inquiry in which the information contained in the descriptive roll was in each case collected.

Untrustworthiness of descriptive rolls.

517. This inquiry is very unequal in its character. The lunatic, before being sent to the asylum, is for a time under the observation of the Civil Surgeon. The latter has to certify to the man's insanity and to the facts which have led to that conclusion. Sometimes the Civil Surgeon fills up the descriptive roll as well as the medical certificate. But the more general practice is that he confines his attention to

the medical certificate, leaving the descriptive roll, which contains all that is known of the lunatic's history, to be filled up by the Magistrate or the police. Where it is the practice for the Civil Surgeon to fill up the descriptive roll, the entry regarding cause is made by him or under his orders. Even in that case, however, he is generally compelled to accept the statements of the police. The majority of the lunatics sent up are wanderers who have no friends. Friends, even when there are any, are averse to appear lest they should be called on to contribute to the support of the lunatic. The following statements may be taken as typical of the usual experience of Civil Surgeons in this respect: "As Civil Surgeon, I got the information from friends or from the police. Very often I had cases where no friends came. In such cases I trusted to the police or wherever I could get my information" (Surgeon-Major Boyd, Colaba). "The information I give in Form C is generally very incomplete, as I have only the lunatic to get it from" (Surgeon-Major Burke, Poona). "The friends very rarely attend. As a rule, then, I am left entirely to the statement or form received and to the police" (Surgeon-Major Emerson, Bareilly). Thus, even where the Civil Surgeon signs the descriptive roll, he bases his entries therein as a rule on information supplied by the police. The more general practice is therefore also the more correct, to have the descriptive roll formally filled in by the police and signed by a Police officer or Magistrate, as the police supply the information. The inquiry into the history of the case is not an inquiry conducted by a professional man from the persons likely to know most about the lunatic. The information consists often merely of the guesses of police officers as to the history and habits of a friendless and homeless wanderer; and in other cases, where a local inquiry is possible, it is generally made by a subordinate police officer.

"I am aware," says the Surgeon-General of the Bombay Presidency, "that inquiries in these cases are generally conducted by a subordinate officer of police." Surgeon-Captain Walsh, of the Calcutta Asylum, says: "The descriptive rolls are filled up as a rule by a Native Police Inspector on the information of a native policeman." Surgeon-Lieutenant-Colonel Bovill, of Patna, goes further. He says: "The statements in the descriptive rolls regarding cause are as a rule not very reliable. I cannot say what grade of police records them. But I think the information is often in small villages brought by chaukidars." Surgeon-Lieutenant-Colonel Crombie, Superintendent, General Hospital, Calcutta, says: "The inquiry is made by the police. I have myself seen an inquiry going on in which a constable was filling in the papers from the statements of the lunatic himself, the man being at the time insane. This may be exceptional, but I have seen it. In any case I distrust this descriptive roll." These are some typical statements regarding the agency which, as a rule, collects the information on which the asylum statistics as to cause are based. Sometimes, as at head-quarters, the inquiring police officer may be an Inspector; but, as a rule, he is very subordinate. It is impossible to share the cheerful optimism of Surgeon-Lieutenant-Colonel O'Brien, of Benares, who says that "when ganja is assigned, the man was probably a notorious ganja smoker. The inquiry may be conducted by a chaprassi, yet he might be right in that." It would be absurd to accept without great distrust the statements, especially as to the cause of insanity, compiled by such an agency as has been described.

This distrust of the descriptive roll is intensified when the source of the information is considered. If the police think it worth while, or find it possible and convenient, to make anything of the nature of an inquiry, they find that they have to be satisfied with the very poorest material. Sometimes, as shown above, it is the statement of the lunatic himself while still insane that is recorded, not only as to history and habits, but also even as to the cause of his insanity. Often, as in the case of garden coolies in Assam or wandering mendicants all over India, it is the statements of mere casual acquaintances who know little of the lunatic's habits and nothing of his past history or of that of his family. Even when friends are found from whom inquiry can be made, they are generally of the most ignorant and unintelligent type. It is from the classes of such a type that most of the inmates of our asylums are taken. It is very rare indeed to find one of the higher and more intelligent classes. The ignorant and uneducated persons who ascribe a child's epilepsy to his having accidently touched the painted stone that represents the village god while playing under the sacred tree, or a fit of insanity to the attack and possession of a *bhût* or village ghost, who know nothing of causality, except in the most ordinary affairs of home or agricultural life, beyond the mere association of coincidence, who believe in no cause which they do not see except witchcraft, whose powers of observation are quite unexercised and undeveloped: such persons must form most unpromising material even for the most patient and intelligent enquirers to work on. The information gleaned from them by such agency as has been above described must be of the most incomplete and unsatisfactory character. It is not surprising that moral causes of insanity, being much less palpable than physical causes, should sometimes be overlooked. A much more surprising fact is the ignoring of many physical causes. Dr. Wise, then Superintendent of the Dacca Asylum, gave a remarkable illustration of this in his report for 1872: "It is a curious circumstance that in Bengal insanity is never traced to blows on the head, which in Europe is a not infrequent cause. This is the more surprising, as there are few races, I believe, who so commonly have marks of blows on their heads as Bengalis. Out of 190 males in the asylum on 1st January last, 57 (or 30 per cent.) had more or less extensive scars or cuts or contusions on the head. In a considerable proportion the blow must have been so severe as to have caused violent concussion of the brain. Yet in the records of this asylum there is no instance of insanity attributed to this cause."

Finally, the distrust of the descriptive roll must be further intensified by the consideration of the pressure brought to bear on subordinates to supply information as to cause. An illustration of this may be found as early as 1863 in the Resolution of the Government of Bengal on the Asylum Reports for 1862. And a striking illustration of the effect of this pressure is found in the Dullunda Asylum returns for the following year (1863), in which the cause in several cases dating from the year 1857 and onwards was altered from "unknown" to "ganja smoking." The same pressure is still brought to bear on those responsible for the entries of cause. Surgeon-Major-General Turnbull, the head of the Medical Department in Bombay, says: "There is a column in Statement VII headed "Unknown" which is intended for the entry of cases in which the cause has not been ascertained with reasonable accuracy. If this column was largely used, I should think it would be a matter of censure on the person on whom the responsibility for inquiry rests." This demand for much information where little

information is available, and this insistence on ascribing a cause where reasonable presumption as to cause is so rarely possible, have had a powerful influence in rendering the statistics untrustworthy. The same tendency is seen at work in other provinces. In Madras the effect of the remark in paragraph 5 of the Government Resolution on the Lunatic Asylum Report for 1890 stigmatizing the Calicut Asylum as "the worst" in respect to the average of unknown causes and of the Surgeon-General's Circular No. 12, dated 28th September 1891 (issued in consequence), is clearly in evidence. In Bengal, Surgeon-Lieutenant-Colonel Meadows, of Berhampur, says: "We assign cause too often ourselves: it is insisted on; and we are constrained to enter cause before it has been properly ascertained." Surgeon-Major Baker, of Rangoon, says: "I think that officers are under the impression that it looks as if they were not zealous if they do not find a cause." Brigade-Surgeon-Lieutenant-Colonel Gaffney, of Jubbulpore, says: "I think that there is a tendency to assign causes too readily;" and he intimates his concurrence in a strong protest made by Surgeon-Major-General Rice when Civil Surgeon of Jubbulpore in 1880 against this tendency. In Assam, Mr. Driberg, Commissioner of Excise, says: "If a man (policeman) does not enter cause, I know by experience that the District Superintendent of Police gets a slip telling him to send a more experienced man, or fine this man for carelessness." The remarks made in 1880 by Dr. Rice, now Surgeon-General with the Government of India, in reference to an unfavourable comment in the Chief Commissioner's review of the report for 1879, may be quoted: "I think it is of doubtful value," he said, "to set down everything told in this way as if it were reasonably true. If these returns are ever to be made use of, it would be better to assign only such alleged causes as have some pretensions to being correct, omitting altogether those which are nothing more than mere conjectures. Even if a great number go unclassified, it is better so than that doubtful causes should be assigned."

Asylum statistics quite untrustworthy.

518. There is one class of cases which seems at first sight to differ from the rest, the cases in which lunatics charged with crime have been acquitted on the ground of insanity. Surgeon-Major McKay, of Nagpur, says: "In criminal cases the cause is generally taken from the judgment of the Court." This statement is apparently too strong. The Commission have had to examine the records and papers in the cases of many criminal lunatics. In the majority of cases the Judge is found to be content with the evidence of the Civil Surgeon as to the fact of insanity, and to consider it unnecessary to make any inquiry as to cause. In such cases the information sent to the asylum authorities is precisely of the same character as that furnished in non-criminal cases. It is very rare indeed that any evidence as to cause appears in the evidence tendered in Court, and still more rare for the Judge to discuss the cause. For all practical purposes, the remarks above made regarding the untrustworthy character of the information supplied to the Superintendents, and of the asylum statistics as to cause based thereon, apply to all classes of cases.

Dacca Asylum no exception.

519. Although these statistics have been discussed seriously from year to year, they have not been much used as the basis of measures of ganja administration except in the case of Burma. In this case the Commission found that the measures taken

in Burma were ostensibly based on the lunatic asylum returns which were quoted by more than one Chief Commissioner, special reference being made to the figures for the Dacca Asylum. This special reference to this asylum and the fact that it is situated in the most important ganja-consuming tract in India were among the reasons why the Commission summoned Surgeon-Lieutenant-Colonel Crombie (Bengal witness No. 104) as a witness; for he had been seven years Superintendent of that asylum. Before the Opium Commission also, and in an interesting discussion on opium published as a Supplement to the *Indian Medical Gazette* of July 1892, Dr. Crombie had incidentally spoken strongly of the evil effects of hemp drugs as seen in his asylum experience. The Commission hoped therefore that Dr. Crombie might be found to have devoted special attention to his asylum work, and to be able to speak with exceptional authority. He informed the Commission in his written evidence that "nearly thirty per cent. of the inmates of lunatic asylums in Bengal are persons who have been ganja smokers, and in a very large proportion of these I believe ganja to be the actual and immediate cause of their insanity. But though I am not prepared to say that the moderate use of ganja is never the cause of insanity, it is most frequently the result of long excessive use, and especially of occasional debauches with the drug. It has the same relationship to insanity in India that alcohol has in Europe, and may be the cause of fierce maniacal excitement of short duration (as in delirium tremens) or of a chronic cheerful mania which is the characteristic insanity of Indian asylums. It has not the same tendency to lead to dementia, the result of tissue changes in the brain, as alcohol has. Like alcohol, it will especially lead to insanity in persons of deficient self-control who take to the drug as a relief from mental trouble. Both forms of ganja insanity, the acute and chronic, are distinguishable by the symptoms. (See separate memorandum.)"

These views, which are stated in greater detail in a separate memorandum, are based entirely on his experience as Superintendent of the Dacca Asylum and as visitor to other asylums; for Dr. Crombie says: "In my practice outside of lunatic asylums my experience is confined to very few cases, only two or three in the whole course of my service, of ganja intoxication brought to hospital." The Commission were anxious to ascertain how far these views might be regarded as having authority. They accordingly examined the registers and case books of the Dacca Asylum for all the years during which Dr. Crombie had been Superintendent, and perused his reports. They were unable to find in these records any ground for thinking that Dr. Crombie's practice differed from that of other Asylum Superintendents, or gave him special opportunities of knowledge. They took the registers for these years and also the papers for all the hemp drug cases of 1887 (Dr. Crombie's last year at Dacca) to Calcutta to discuss them with Dr. Crombie. That discussion is contained in the record of his oral evidence.

First, as to procedure, Dr. Crombie told the Commission that the descriptive roll is "by no means trustworthy," but that "subsequent discoveries" were made in the asylum by examination of friends or of the lunatic on recovery and by other means, and that the entries in the asylum books would be altered accordingly. "This," he said, "was my practice." The Commission had found no trace of this practice in the asylum records; and they showed Dr.

Crombie the registers and asked him to point out any such alterations. He then withdrew his statement, and accepted as accurate the statement of Rames Chandra Sib, Overseer of the Dacca Asylum, who has made the entries in the registers and compiled Statement No. VII ever since 1880. His statement is: " The cause is entered in the register from the descriptive roll.................. Cause is never entered in the register from enquiry made after the patient's admission. I know of no case of this being done. The entry made at the top of the page would never be altered. But if any enquiry which I might make showed cause not hitherto known, this fact would be entered in the history of the case. I remember such cases, and I might be able to point them out. But that entry in the history of the case would not alter the cause as shown in Statement VII of the annual report. That statement is filled up only from the entries made in the descriptive roll as copied into our register." Dr. Crombie's procedure then differed in no respect from the most mechanical and unintelligent record of causation in any asylum in India, for it was left entirely as clerical work to a subordinate. And the only statistics on which Dr. Crombie bases his views regarding insanity rest on the descriptive rolls, of which he strongly declares his distrust.

Secondly, in regard to Dr. Crombie's attention to the special matter of causation of insanity, it appears that "there was no discussion of cause in any annual report written by him from Dacca, nor any formal discussion in writing." Like other Superintendents, he seems not to have felt that his duty required special attention to this subject.

Thirdly, the Commission discussed with Dr. Crombie the cases of 1887, and the results of this discussion of them are recorded in his oral examination. They afford clear proof of the fact that even a careful examination of the papers received with the lunatics on their admission would have prevented five out of the fourteen cases being recorded as hemp drug cases (*viz.*, the first, fourth, tenth, thirteenth, and probably also the twelfth), and would have led to two more being recorded as mixed or doubtful cases (*viz.*, the second and fourteenth). The history in the asylum should have prevented the fifth case being retained as a ganja case; for the true cause (peripheral irritation) was clearly established, and insanity was cured on removal of that cause. It should also have led to the rejection of the eighth case, or at least to its being recorded as a mixed case. Thus nine out of the fourteen hemp drug cases of 1887 at Dacca are found to have been erroneously entered as such. There remain only five true hemp drug cases. Dr. Crombie says: "Taking my whole asylum experience, I think that this may probably be accepted as fairly representative of the real state of the case." The total admissions in 1887 to the Dacca Asylum were 55. Of these Dr. Crombie now accepts only 5 (or 9 per cent.) as due to hemp drugs. And he states that this may be accepted as fairly representative of the real state of the case, so far as his experience enables him to judge.

Fourthly, as to Dr. Crombie's conclusions. As there were fifty-five admissions into the asylum in 1887, the number of cases (five) which may reasonably be attributed to ganja turns out to be only nine per cent. As Dr. Crombie says that the "chronic cheerful mania" which he describes is only found in a portion (or, as his separate memorandum shows, in a minority) of the admissions, and as he admits that it "may be due in part to difference of character" and not to the drug, there does not seem to be much, if any, ground for associating this chairomania with hemp. And in view of the small proportion of true hemp

drug cases and the large proportion (nearly 2 to 1) of error in the cases accepted and recorded as hemp drug cases in Dr. Crombie's time too much weight should not be attached to his views regarding the clinical features of hemp drug insanity. The results of a careful analysis and examination of his cases corresponds on the whole pretty accurately with the examination of the cases of 1892 for all India made by the Commission. Looking back at his work in Dacca from his present point of view, Dr. Crombie seems to have thought that he had had some experience of special value, but the impression appears on examination to be due to a mistake of memory. There is practically nothing that differentiates his experience or the practice of the Dacca Asylum from that of other Superintendents and other asylums in India.

Explanation of the use of these worthless statistics.

520. It may well seem extraordinary that statistics based on such absolutely untrustworthy material should have been submitted year after year in the asylum reports. It is extraordinary, and cannot certainly be fully justified. The following considerations serve to a certain extent to explain this extraordinary fact. In the first place, as is pointed out by several Superintendents, these officers did not know what grade of police or what kind of agency was employed in the inquiry. They believed that they were bound to accept, and justified in accepting, without question what came to them with an appearance of official authority. In the second place, all the Superintendents, except those in the towns of Madras and Bombay, have their asylum work in addition to other medical duties. They have found themselves unable to devote that amount of time and care to their asylum work which would enable them to speak as experts or to supply information of any real value. Some of the best of them have stated to the members of the Commission who visited the asylums that they constantly found themselves subordinating the asylum work to duties which appeared more pressing and more important. In the third place, as already pointed out, they have been so pressed to give statistical information that they have often done so without considering whether it could be regarded as scientifically or even reasonably accurate. In the fourth place, most of the Superintendents, though they had long practised medicine in this country, had never seen any of the effects of hemp drugs except their alleged effects in producing insanity in the cases attributed in the papers to the drugs. Several Superintendents speak clearly of this ignorance of the effects of the drugs. The remarks of three may be quoted as being specially interesting. Surgeon-Lieutenant-Colonel Leapingwell (Vizagapatam) says: "I should myself have put down ganja as the cause of insanity in any case where I examined the friends if they merely said the man used ganja and I could get no other cause, as I did not discriminate between the excessive and moderate use. I should go much more carefully into the matter now, since I have in the course of the present inquiry learned so much more about the use of the drugs." Surgeon-Major Cobb, of Dacca, says: "As to the effects of ganja generally, I should say that until I began to study the question with a view to give evidence before the Commission, although I had a vague notion that ganja smoking was prevalent among the lower classes in Bengal, I had no idea that the practice was as common as I have since found it to be." Surgeon-Major Willcocks, of Agra, says: "Ordinarily it has been the practice to enter hemp drugs as the cause of insanity where it has been shown that the patient used these drugs. I cannot say precisely why this is the practice. It has come down as the traditional practice. As a matter of fact, until recently I looked on these drugs as very poisonous. As I

have already said, my ordinary medical practice did not bring me into contact with them at all. I only came into contact with them in the asylum. I had no idea that they were used so extensively as I find on enquiry to be the case. I have made enquiry in connection with the attention drawn to the matter recently."

These are some of the explanations which may be offered for the submission by Superintendents of such statistics year by year. Further, though such evidence as that of Surgeon-Major-General DeFabeck of Madras shows most clearly how little knowledge some heads of the Medical Department have had of the untrustworthy character of the statistics, it does not show this more clearly than does the mere fact that year after year these statistics have been seriously discussed alike by these officers and by the Governments under whom they serve.

Further inquiries made by the Commission.

521. The Commission were forced to the conclusion that there was no trustworthy basis for a satisfactory and reasonably accurate opinion on the connection between hemp drugs and insanity in the asylum statistics appended to the annual reports. They felt that they must conduct for themselves as full and searching an inquiry as was possible within the time at their disposal into the history of a considerable number of cases. As already stated, they selected as the subject of their inquiry all the cases admitted into all the asylums in India in 1892 and ascribed to hemp drugs. They took up each of these cases separately in the asylum, and ascertained what information was obtainable in regard to it from perusal of the original papers and the asylum registers, and also by enquiry from the Superintendent and Asylum officials. Having recorded all such information, they asked the Superintendent of each asylum to conduct further inquiry into each case and report finally on it, and they requested Local Governments to direct the Magistrates and Civil Surgeons of districts to which the patients belong to give the Superintendent all necessary assistance. The Commission added: "In view of the importance of this branch of the inquiry, it is suggested that, wherever this is possible, a careful local inquiry should be conducted by a trustworthy and experienced Magistrate, in consultation with the Civil Surgeon, to ascertain the past personal and family history of the patient, and any circumstances likely to throw light on the cause of his insanity. The record of this inquiry should in each case be submitted to the Commission through the Superintendent of the asylum in which the patient was treated to enable him to submit the report above mentioned." All this information, both that collected in the asylums and that collected in these further inquiries, is recorded in Vol. II Appendices. Only the final report of the Superintendent is printed, unless it is inaccurate or incomplete, or unless there is anything of interest in the records which he has not noticed. In these cases notes containing the points omitted or inaccurately stated, or extracts from the records, are appended to his report. Prefixed to these papers is a statement of the decision of the Commission on all of the cases, showing very briefly for each why it has been accepted or rejected. In a few cases the results of the inquiries are unsatisfactory; for it has been impossible occasionally to get any further information; and occasionally the inquiry, even though feasible, has not been conducted with sufficient care and intelligence. On the whole, however, the result is the collection of a body of information about these selected cases far superior to anything heretofore available.

The result of the examination of all the cases attributed to hemp drugs in 1892 may be thus shown :—

Province.	Asylum.	Total admission in 1892.	Cases attributed to hemp drugs in 1892.	Number of cases accepted.			Number of cases rejected.	Percentage.	
				As due to hemp drugs.	As "mixed" cases.	Total.		Column 4 to column 3.	Column 7 to column 3.
1	2	3	4	5	6	7	8	9	10
BENGAL ...	Dullunda ...	64	18	5	3	8	10	28·1	12·5
	Patna	38	8	2	1	3	5	21·0	7·8
	Dacca	43	15	4	1	5	10	34·8	11·6
	Berhampur ...	38	11	3	1	4	7	28·9	10·5
	Cuttack	3	1	...	...	...	1	33·3	0·0
	Total ...	186	53	14	6	20	33	28·4	10·7
ASSAM ...	Tezpur	43	13	...	3	3	10	30·2	6·9
NORTH-WESTERN PROVINCES.	Benares	47	6	5	...	5	1	12·7	10·6
	Agra	72	18	5	2	7	11	25·0	9·7
	Bareilly	76	11	2	4	6	5	14·4	7·9
	Lucknow	89	17	3	1	4	13	19·1	4·4
	Total ..	284	52	15	7	22	30	18·3	7·7
PUNJAB ...	Delhi	54	10	4	1	5	5	18·5	9·2
	Lahore	78	12	6	3	9	3	15·3	11·4
	Total ...	132	22	10	4	14	8	16·6	10·6
CENTRAL PROVINCES.	Jubbulpore ...	35	6	...	1	1	5	17·1	2·8
	Nagpur	27	7	2	2	4	3	25·9	14·8
	Total ...	62	13	2	3	5	8	20·9	8·0
MADRAS ...	Madras	216	17	2	4	6	11	7·8	2·7
	Vizagapatam ...	8	1	...	1	1	...	12·5	12·5
	Calicut	21	1	...	...	...	1	4·7	0·0
	Total ...	245	19	2	5	7	12	7·7	2·8
BOMBAY ...	Colaba	162	13	5	3	8	5	8·0	4·9
	Poona	36	6	4	1	5	1	16·6	13·8
	Ahmedabad ...	19	9	2	1	3	6	47·3	15·7
	Ratnagiri ...	26	5	2	1	3	2	19·2	7·6
	Dharwar	7	1	...	1	1	...	14·2	14·2
	Hyderabad (Sind) ...	40	13	3	1	4	9	32·5	10·0
	Total ...	290	47	16	8	24	23	16·2	8·2
BURMA ...	Rangoon	102	3	2	1	3	...	2·9	2·9
	GRAND TOTAL ...	1,344	222	61	37	98	124	16·5	7·3

Out of 1,344 admissions to the asylums of British India during 1892, there are shown to be only 98 cases (or 7·3 per cent.) in which the use of hemp drugs may be reasonably regarded as a factor in causing the insanity. If the "mixed" cases in which the hemp drugs have only been accepted as one of several possible causes are omitted, the percentage falls to 4·5. It must be borne in mind, however, that there were 42 per cent. of the admissions for 1892 in which the cause of insanity was shown as "unknown." Among these "unknown" cases there may, no doubt, have been some in which hemp drugs may, as in the accepted cases, have played some part in causing insanity. If it had been possible to ascertain the history of these "unknown" cases, it might have been found that there was in a considerable number of them a history of the use of hemp drugs, and perhaps that in some of them these drugs had played some part at least in causing the insanity. It might appear at first sight to be more correct to take the percentage, not on the total admissions into the asylums, but on the "known" cases among these admissions. The total number of "known" cases (*i. e.*, cases in which the cause was supposed to be known) among the admissions for 1892 was 775. This would give a percentage of hemp drug cases at 12·6. But the Commission do not see their way to accept this method of calculation as accurate. For they consider that both experience and the whole history of this inquiry have shown that there is little difficulty in ascertaining the existence of the ganja habit among persons such as are sent to the asylums, and also that there is no hesitation in ascribing insanity to that habit. They are therefore of opinion that it is safe to presume that in the great majority of the "unknown" cases no ganja habit did exist, and that they would be further from the truth in taking the percentage at 12·6 than at 7·3.

Mixed cases.

522. On the other hand, it would be far from accurate to say that it has been ascertained that the insanity was in all these 98 cases due solely to hemp drugs. In the first place, there are 37 of them (or nearly 38 per cent.) in which there is a clear history of some other cause. The causes which are shown thus to have possibly co-operated with hemp drugs in inducing insanity (with the number of causes for each) are as follow :—

Cause		Cause	
Heredity ...	... 4	Grief	... 3
alcohol and vice	... 2	„ hard life and liquor	... 1
„ and business losses	... 1	„ and opium ...	... 1
Fever ...	... 1	Madak ...	... 1
Sun and malaria ...	... 3	Acholol ...	... 11
Syphilis ...	... 1	„ and opium ...	... 1
Sexual excess ...	... 1	„ and vicious habits	... 2
Dhatura ...	... 3	„ and epilepsy	... 1

Heredity.

523. Only a few remarks need be made regarding these "mixed" cases. So far as the inquiries have established the real facts regarding these cases, there are seven into which heredity enters as a predisposing factor. The number of cases attributed to heredity throughout India in 1892 was 51, or 3·8 per cent. of the admissions (1,344). These seven cases may perhaps be added to this number, giving a total of 58, or 4·3 per cent. In England the percentage of cases attributed to heredity is 19·0 for males and 22·1 for females. These percentages are based on statistics for ten years, dealing with 136,478 patients (*vide*

Hack Tuke's Dictionary of Psychological Medicine; article "Statistics of Insanity"). The author of this article points out that "the reluctance of the relatives of patients to give information on this painful point leaves the proportion undoubtedly far too low." In view of this, it cannot be denied that the influence of heredity is in India practically neglected. The importance of giving due weight to this factor becomes the more manifest when it is considered that a cause which in a normally healthy brain would produce no effect is sufficient to overthrow the mental equilibrium of a person with hereditary predisposition.

Alcohol.

524. There are eighteen of these mixed cases in which alcohol has been ascertained to be a possible factor. In view of the connection between alcohol and insanity as established in Europe, and in view of the clear evidence that brain lesions are directly caused by alcohol, there seems certainly not less reason for ascribing these cases to alcohol than to hemp drugs. The English statistics show percentages of 19·8 and 7·2 of cases as due to alcohol for males and females respectively. The Commission are of opinion that such high percentages cannot be expected in India; for, although the action of alcohol is more injurious in the tropics, the people of this country are generally much more abstemious. The percentage of cases attributed to alcohol in each province in 1892 is given below, and for purposes of comparison the percentage of the accepted hemp drug cases (including the "mixed" cases) is also shown:—

Province.	Percentage of hemp drug cases.	Percentage of alcohol cases.	Total of columns 2 and 3.
1	2	3	4
Bengal	10·7	2·1	12·8
Assam	6·9	6·9	13·6
North-Western Provinces	7·7	3·5	11·2
Punjab	10·6	1·5	12·1
Central Provinces	8·0	...	8·0
Madras	2·8	2·8	5·6
Bombay	8·2	7·2	15·4
Burma	2·9	11·7	14·6
Total ...	7·3	4·4	11·7

The figures in regard to alcohol cannot be accepted as quite satisfactory, because they have not been tested. But the tendency of the figures as they stand is to show that in the provinces where hemp drugs are the less used, alcohol is the more frequently assigned as the cause of insanity, and *vice versâ*. It is possible either that the figures to a certain extent reflect the facts, or merely that those who have to account for insanity turn most easily to intoxicants, and came that intoxicant which most readily occurs to them.

525. There are three "mixed" cases in which dhatura has been ascertained to be a possible cause of insanity. In view of the facts that dhatura is a more potent intoxicant than the hemp drugs and produces furious delirium, and that Dr. Cunningham's experiments appear to indicate clearly that grave cerebral lesions are very early produced by dhatura and are not produced by ganja, it would probably be safer to accept these cases as due to dhatura and not to hemp drugs. The Commission have, however, accepted them as "mixed" cases. It is unnecessary to make any special remarks on the "mixed" cases in which causes other than heredity, alcohol, and dhatura appear to contribute to the insanity.

Dhatura.

526. Even in regard to the remaining 61 cases, it must be borne in mind that it is impossible to say that the use of hemp drugs was in all the sole cause of insanity, or indeed any part of the cause. The following considerations combine to demand caution and reserve in pronouncing an opinion on this point.

Cases due to hemp drugs.

Firstly, there are twelve cases in which it has been found impossible to obtain any further information by local inquiry. In these cases we are thrown back on the original papers and the asylum history. Besides these, there are ten more cases in which the patients are beggars and foreign labourers about whose past history no satisfactory information is obtainable. Thus there remain only 39 of these 61 cases about which anything like a satisfactory inquiry has been possible. Further, a great majority of these cases come from the lower orders of cultivators and labourers, from whom information of any value is very difficult to obtain as to other than the most apparent causes. The fact of the existence of the hemp habit is easy enough to ascertain, but that it is the cause, or one of the causes of the insanity, or that it even preceded the insanity, is much more difficult to establish.

Secondly, the method of inquiry has not been satisfactory in regard to all the cases referred for local inquiry. In regard to the great majority, the instructions issued by the Commission as to the agency by which this further inquiry should be conducted have been carried out. But in some, it will be observed, even this further inquiry has been left to the police. Then again there are cases, such as those of the Hyderabad (Sind) Asylum, in which the Superintendent has necessarily been the principal agent in the inquiry, and has, perhaps, not unnaturally, but certainly unfortunately, evinced a strong tendency to defend the old asylum entries regarding cause. The series of questions framed by the Civil Surgeon of Delhi for use in the further inquiry also illustrates a tendency to assume that the cases were hemp drug cases, and thus to limit the scope of the inquiry.

Thirdly, it may be noted that excess in the use of hemp drugs is very frequently only one of several vices in which a dissipated man indulges. Further inquiry has proved this in several cases. There is strong probability that had information been complete, it would have been established in many more cases. It is impossible in such cases to say definitely to what form of excess insanity may be mainly due. Further, it is an accepted and established fact that intemperance of any kind may sometimes be not the cause of insanity, but an early manifestation of mental instability. Dr. Conolly Norman (Hack Tuke's Dictionary of Psycho-

logical Medicine; article "Mania") says: "The patient also indulges in intoxicants with very undue or unwonted freedom, and thereby precipitates the course and aggravates the symptoms of his disease." One or two cases have been rejected by the Commission on the ground that the evidence merely showed that the habit of use of hemp began at the same time as the mental aberration, or even later. There may have been other cases in which this would have been shown had the information been complete. It is possible therefore that more complete information might have shown in some cases, not only that other causes contributed to the insanity, but also that hemp drugs had nothing whatever to do with inducing it.

These and similar considerations already indicated demand caution in the expression of any judgment as to the causation of insanity in this country. If in England opinion, based on inquiries such as are there possible, has to be stated with caution, this is much more necessary here. In many of the cases in which the hemp drug habit has been established, it is impossible to feel certain in view of the defective character of the information that the drugs have been the sole cause, or perhaps indeed a cause at all, of the insanity. The Commission have, however, felt themselves justified in accepting these 98 cases of the year 1892 as reasonably attributable, in whole or in part, to the use of hemp drugs. These are the best cases they have been able within the time at their disposal to obtain. Of these 98 cases, 97 were males and one female, 82 being Hindus and 16 Muhammadans.

Classification and types of accepted cases.

527. In the asylum returns these cases were classified according to the following "types":—*Toxic insanity*, 39; *mania*, 42; *melancholia*, 3; *dementia*, 4; while in ten cases the patients had recovered prior to admission, and did not exhibit symptoms of mental aberration while in the asylum. The Commission think it well to point out that although in these instances symptoms of insanity were never observed by the Asylum Superintendents, yet the cases were returned in the annual reports as cases of *toxic insanity*, and thus helped to augment the annual returns (Statement VI)—a fact which very strikingly exemplifies the purely mechanical manner in which these returns have hitherto been compiled.

Occupation.

528. The occupations, etc., of these 98 cases may be tabulated as follows. They have been abstracted from the "descriptive rolls" or from information supplied on subsequent inquiries at the instance of the Commission. The Commission cannot, however, vouch for the accuracy of these returns. In one instance an insane of the lower classes, described as a "zamindar," proved to be a school-boy, the son of a muharir in a munsiff's court.

Occupation	Number	Occupation	Number
Fakir	5	Panda	1
Beggar	16	Student	1
Cultivator	13	Prostitute	1
Shopkeeper	7	Priest	1
Trader	12	Constable	1
Labourer	15	Tahsil jemadar	1
Servant	6	Sowar	1
Sepoy	4	Not known	12
Teacher	1		
	79	Total ...	98

529. The following table shows the relative liability to insanity at different ages in the hemp drugs cases. This information has been compiled solely from the "descriptive rolls," and in very many instances thea ges entered are doubtless only rough guesses. At all times it is difficult to ascertain the true age of a native of the lower classes, and in the case of wandering insanes, beggars, etc., the determination of age must necessarily be inexact and a mere approximation :—

Liability at various ages, and relapses.

Age from	15 to 20 years,	10 cases,	1 instance of a second attack.		
"	21 to 25 "	32 "	3 "	one prior attack.	
"	26 to 30 "	22 "	3 "	"	
"	31 to 35 "	11 "	1 "	"	
"	36 to 40 "	6 "	... "	"	
"	41 to 45 "	5 "	1 "	"	
"	46 to 50 "	7 "	2 "	"	
"	51 to 55 "	2 "	1 "	"	
"	56 to 60 "	1 "	1 "	"	
"	75 "	1 "	... "	"	
Age unknown		1 "	... "	"	

Total 98 cases, 13 instances of relapses.

530. The data for ascertaining the duration of insanity are either unreliable or not procurable in all cases for the periods during which the insanes were at large, and it is only with the duration of residence in asylums that the Commission can give any accurate details. The duration of the insanity before admission into the asylum for the 53 cases for which information is recorded is shown in the following table :—

Duration of insanity.

Duration of insanity before admission to asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.
One month and under ...	4	2	3	...	1	...	2	1
Not exceeding 3 months ...	3	3	2	1	1	1	...	...
Not exceeding 6 months ...	...	4	4	1	1	2	...	...
Not exceeding 12 months ...	...	3	3	...	...	...	1	1
Not exceeding 18 months ...	...	...	1	...	1	...	...	...
3 years	...	2	1	1	1	...	...	..
5 years	...	...	...	1	...	...	...	...
12 years	...	...	...	1	...	...	...	...

Out of the 98 accepted cases, 10 were not insane on admission into asylums, 29 were not cured, and 9 died during residence. Regarding the cases described as "not cured," it is necessary to explain that the expression is to be taken only relatively for the period during which the patients were under observation by the Commission, and which as a general rule would be under two years. The duration of residence in asylums of the 50 patients discharged during the period mentioned may be tabulated as follows:—

Ages of patients.

Duration of residence in asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.	56 to 60 years.	75 years.	Age not known.
Not insane on admission.	1	2	3	1	...	...	1	...	...	1	1
One month and under.	...	2	2	...	...	...	...	...	...	...	...
Not exceeding 3 months.	1	4	2	1	...	...	...	...	...	...	...
Not exceeding 6 months.	6	8	2	2	1	...	3	...	...	...	...
Not exceeding 12 months.	...	5	6	2	...	...	...	...	1	...	...
Not exceeding 18 months.	...	...	1	1	...	...	...	...	...	...	...
Not cured ...	2	9	6	4	3	2	2	1	...	...	...
Died ...	...	2	...	2	3	1	1	...	...	...	...

These figures would appear to indicate that the largest number of discharges, 38 per cent., occurred after a residence not exceeding six months in the asylums, and of the rejected cases 19 per cent. were discharged after a similar residence. After a residence of over six and not exceeding twelve months, 16 per cent. of the accepted cases (making a total of 54 per cent. for the whole year) were discharged, and 10 per cent. (a total of 29) of the rejected. Dr. Walsh (Bengal witness No. 112), in a supplement to his written evidence, remarks: "The average period under treatment in the asylum at Dullunda of 55 cases discharged cured during five years (1888-92) varied from 3 to 10 months, and many of these were kept under observation for some time after they had been pronounced sane. Of the 108 cases admitted, more than half recovered very quickly, and this points to some cause easily removable."

For the purpose of comparison, the duration of residence in asylums of the rejected cases of 1892 is given in the following table. This table contains only 121 cases, because of the 124 rejected cases, two were not cases of 1892 at all,

and one was rejected because it has been entered a second time on the statement :—

Duration of residence in asylum.	15 to 20 years.	21 to 25 years.	26 to 30 years.	31 to 35 years.	36 to 40 years.	41 to 45 years.	46 to 50 years.	51 to 55 years.	Over 60.	Age unknown.
Not insane on admission.	...	1	1	...	...	1	...	...	...	1
One month and under.	1	...	...	1	...	1	...	...	...	...
Not exceeding 3 months.	2	1	...	1	...	2	...	...	...	...
Not exceeding 6 months.	3	5	4	2	...	...	...	...	...	...
Not exceeding 12 months.	5	2	3	1	1	...	...	...	...	...
Not exceeding 18 months.	...	1	...	1	...	1	...	...	...	...
Not cured ...	2	11	19	17	8	3	1	...	...	3
Died ...	...	3	4	2	2	1	...	1	2	...

Proportion of recoveries.

531. The proportion of recoveries calculated on the 98 accepted cases would amount to 61·2 per cent., or, deducting from both sides the 10 patients who were not insane on admission, to 56·8 per cent. Calculated in the same manner, the percentage of recoveries of the rejected cases would be 34·7 and 32·4.

Mortality.

532. Calculated on the accepted cases, the mortality amounted to 9·1 per cent. In no single case, however, was the death due directly to the mental condition. The mortality in the rejected cases amounted to 12·3 per cent. on the total admissions. There is one fact which vitiates the figures in connection with mortality in asylums—that is, the practice which exists at all events in the Tezpur Asylum, Assam, of transferring dying patients to the "Moribund Ward" of the Charitable Dispensary for medical treatment.

Symptomatology.

533. The Commission would premise the analysis of the symptoms presented by the accepted cases by remarking that the information available is extremely meagre. As a rule the asylum records fail to afford a full clinical history of the condition of the patients on first admission, and the subsequent entries in the asylum case books are also frequently lacking in useful information. In one asylum no case book appeared to have been kept up in 1892. The medical certificates on which the patients are admitted into the asylums usually contain only sufficient evidence of the mental state to support an opinion as to the mere fact of insanity. The descriptive rolls are the only source in the vast majority of cases from which the mode of incidence and duration of attack, the habits, and the personal and family history of the patients can be ascertained. The value to be placed on certain entries in the descriptive roll has already been fully discussed. They have been shown to be untrustworthy, and there is no reason to suppose that other entries are more accurate or reliable.

In 17 out of 98 cases only is information recorded as to the nature of the onset of the symptoms; in eight it may be described "sudden;" in six as "gradual" or "slow"; and in three as "insidious." As a rule no detailed information is ascertainable regarding the nature of the premonitory symptoms or their duration. "Headache" has been mentioned, but beyond that there are no clinical symptoms. Sometimes alteration in habit is alluded to, but more frequently attention has first been drawn to the mental condition by some insane, violent, or destructive act which has led to the individual being sent to a medical officer for observation. Regarding the state of the general bodily health on admission into asylums, in 35 cases it is described as "good," in 20 "fair," in 8 "indifferent," in 6 "bad," in 3 "weak" or "very weak," and in the remaining cases no information is recorded. As a rule no records are kept of the form or measurements of the head, general physical features are not recorded, and thermometrical observations do not usually appear to be made. The facial expression is as a rule not described, and in three instances only is it referred to as "vacant." The appearance of a "ganja wart" on the palm is mentioned by one Superintendent. The gait is as a rule not described. Abnormalities or signs of disease of the sexual organs are not usually mentioned. The condition of the circulatory and respiratory systems are not as a rule recorded. Under the digestive system it may be mentioned that in fifteen cases food was refused, necessitating forcible feeding. No information as a rule is available regarding the glandular system, state of the skin, or character of the urine. Under the muscular system "tremor" has been referred to and "muscular twitchings like chorea." But such features as power of "grasp" of hands or, reaction to electric stimulus are not mentioned. Under the nervous system—sight, hearing, taste, and smell—no systematic observations appear to be recorded; in only one asylum was there any record regarding the state of the pupils; in one asylum redness of the conjunctiva was mentioned; and in one asylum the eyes are described as "red." The conditions of nervous sensibility, hyperæsthesia and anæsthesia, do not appear to have received attention; and in one asylum only are reflex phenomena mentioned.

Regarding mental symptoms. In fifty-six cases incoherence of language is mentioned, in seven uncommunicativeness, in seven silentness, in nine talkativeness, in twelve muttering, and in twenty-two abusiveness or obscenity of language; in four cases the patients were "excited," in three roaring, in twenty-four noisy, in twelve restless, and in thirty-one sleepless. In seven cases there were symptoms of "exaltation," in thirteen quarrelsomeness, in twenty-nine destructiveness, twenty-five were homicidal, twelve suicidal—frequently the same case exhibited both tendencies—and thirty-six violent. In twelve cases there was laughter, in two dancing, in one absurd postures, and fourteen were either sad, crying, or moaning. Forty-six were dirty or filthy in their habits, twenty-one were indecent, in twenty-four there were delusions, and in four cases the patients are described as "childish."

The alteration in symptoms in the asylum was in some cases very rapid, so rapid in some instances as to be almost immediate. In others the progress towards sanity was slower; in some there were relapses, with occasional outbursts of violence; while others from being violent and abusive became melancholic or quiet and silly, or drifted into a condition of dementia.

534. The cause of death in the nine fatal cases was as follows: One general debility, one cholera, two dysentery, one leprosy, one heart disease, one diarrhœa, one dropsy and old age, and one no cause assigned. In five of these cases no *post-mortem* examination appears to have been made; in the four in which it was conducted, the condition of the brain is not specially noted in three, while in one case—death from cholera—the following note is made: "Weight 43 oz.; both membranes and substance of brain congested, and lateral ventricles contained a very small quantity of fluid. Brain substance firm." As to the results of *post mortem* examinations in alleged ganja cases, therefore, the evidence is purely negative as to any even coarse brain changes being present. It may be remarked, however, that as a rule when autopsies have been conducted in asylums, it has been solely with the object of ascertaining the cause of death and not for purposes of pathological research. In most cases the brain does not appear to have been examined, and, when it has been examined, the information recorded is so meagre and superficial as to be valueless.

Post-mortem examinations.

535. Reviewing the mode of incidence so far as it can be ascertained, the type, general symptoms, and duration of cases in which the mental balance has been alleged to have been overthrown by the use of hemp drugs, the question arises are there any symptoms pathognomonic of the condition generally known as hemp drug insanity, and on what does the evidence rest that the use of these drugs may induce mental aberration? The evidence obtained by the Commission appears to indicate that in the cases of alleged hemp drug insanity which find their way into asylums, there are no typical features in the premonitory symptoms and no pathognomonic symptoms in the insane condition on which to base a determination of causation. The mode of incidence, the premonitory symptoms, and the symptoms of the insane state are practically the same in cases in which these drugs have never been used as in instances in which the mental equipoise has been accepted as being disturbed by their employment. The type of hemp drug insanity is mania, though in the subsequent history of a few cases there appears to be divergence from the type. The mania may be acute or chronic. The majority of medical witnesses who have studied the subject are clearly of opinion that there is nothing typical in the symptomatology of hemp drug mania to distinguish it from mania due to other causes. But at the same time several express an opinion that the symptoms are of shorter duration in hemp drug mania than in mania due to other causes. Besides this pretty generally accepted view that short duration is a diagnostic mark of hemp drug insanity, one or two witnesses are inclined to think that there are other characteristic symptoms. Dr. Cobb (Bengal witness No. 110) in his oral evidence states: "There is nothing very typical in the symptoms, but still ganja insanity has points of distinction from other kinds of insanity. It is very temporary. Confinement of the patient with removal of the exciting cause generally brings about rapid cure. Delirium is a prominent feature. There are other general features which it is difficult to put into words, and which experience alone can teach.........One recognizes ganja insanity intuitively. All the symptoms I have described may be present in other kinds of insanity, but one judges by the combination of them." Dr. Crombie (Bengal witness No. 104) in the appendix to his written evidence states: "I refer to the peculiar characters of this form

Diagnosis of hemp drug insanity.

of toxic insanity by which it can be recognized just, or nearly as readily, as those of delirium tremens distinguish alcoholic intoxication. To enable me to do so clearly, it is necessary to distinguish between acute ganja intoxication due to a single debauch or to continuous excessive use of it in what might be called a bout of ganja drunkenness, and the effects of its continued immoderate use over a lengthened period of time. Acute ganja intoxication is marked by the extreme vehemence of the mania. In its mental, moral, and muscular manifestations, it bears no resemblance to alcoholic intoxication whatever. The maniac is excited in every fibre. His aspect is infuriated, his eye glares and is tense and glistening, while at the same time the conjunctiva is red and injected. He shouts, vociferates, sings, walks quickly up and down or round his cell, and shakes the door out of its fastenings. If at liberty, he is violent and aggressive, and may run *amok*. In other cases the mental disturbance is less marked, but the demeanour is excited, and he suddenly seizes some weapon, and slays one or more of the people in his neighbourhood without apparent reason. The attack is of short duration, being limited to a few days. Then there is perfect recovery, and the patient is oblivious of things which took place during the period of intoxication...........The insanity produced by the long-continued immoderate use of ganja has also features of its own. The patients are hilarious, attitudinise, and are full of the sense of well-being; they are as a rule good-natured and trustworthy, and recover in a large proportion of cases under confinement and deprivation of the drug. These cases characterize Indian asylums by the large number of happy amusing lunatics they contain. They are, however, very subject to relapses even after lengthened periods of freedom from symptoms."

The alleged shorter duration of hemp drug cases is to some extent borne out by the statistics obtained by comparing the accepted and rejected cases for 1892. In the accepted cases (98), after deducting the ten patients who were not insane on admission, the percentage of recoveries has amounted to 56·8 per cent. of the total admissions, while of the rejected cases only 32·4 per cent. of the admissions have recovered. The Commission consider, however, that too much stress should not be placed upon rapidity of recovery as a diagnostic sign in attempting to differentiate between hemp drug and ordinary mania. It is well recognized that as a rule ordinary uncomplicated cases of mania rapidly recover. Moreover, bearing in mind that hitherto hemp drug cases have been accepted as such as a rule on untrustworthy evidence, and that consequently many of the cases on which Superintendents of Asylums have based an opinion as to the relative rapidity of cure of hemp drug and ordinary mania were not actually toxic cases, "rapidity of recovery" can only be accepted tentatively as a means of discrimination. It is scarcely necessary to observe that this so called "diagnostic mark" has not been used in diagnosing hemp drug insanity in the asylums, as it has been shown that diagnosis was made on the admission of the patient and not after his recovery.

In connection with the alleged greater recoverability of cases of hemp drug mania, it may be of interest to quote statistics of cases in an English asylum. In the West Riding Asylum the percentage of recoveries in acute and simple mania were respectively 65·5 and 61 per cent., while 8·4 and 11·9 per cent. were relieved and 11·9 and 16 per cent. formed a chronic residue. Taking all maniacal forms in the same asylum (including the simple, acute, hysteric, chronic,

delusional, recurrent, and puerperal), the recoveries amounted to 53·2 per cent.: 14 per cent. were relieved, and 20·6 per cent. formed a chronic remainder. Obviously, however, these figures are not strictly comparable with the statistics of the hemp drugs and rejected cases with which the Commission have been dealing, because the Indian cases have only been a limited period under observation—under two years—while the West Riding Asylum statistics refer to periods of several years.

In considering the "peculiar characters" of hemp drug insanity as alluded to by Dr. Crombie, the Commission have to recall attention to the erroneous character of the statistics which form the basis of that officer's conclusions, and also to point out that generally all the features of the acute form as described by Dr. Crombie are comparable with the symptoms of transitory mania and the symptoms of the chronic form with those usually found in cases of mania unconnected with the use of hemp drugs. Indeed, Otto Von Schwatzer's description of transitory mania in the Dictionary of Psychological Medicine might be read in lieu of Dr. Crombie's "peculiar character" of the symptoms. "The principal characteristic of transitory mania is the spontaneous and ungovernable intense excitement produced by the cerebral irritation and the morbidly exaggerated motor impulse, which, however, does not consist, as in other and milder forms of frenzy, of a more or less harmless restlessness, but in a wild paroxysm with a blind desire of destruction. The excitement extends with great intensity over the whole of the motor sphere, so that not single muscles, but the whole muscular system, is under its influence. All the wild motor discharges are without any purpose and object .... Every idea is at once expressed either by words or by inarticulate cries, screams, and shouts .... lively and sparkling eyes, which protrude from the orbits, redness of the conjunctiva, threatening or staring look .... As rapidly and suddenly as the attack comes, so suddenly it also disappears. Another abnormality of transitory mania is that its duration may be very much protracted, there being cases in which the attack lasted several days .... Recollection generally reaches as far as the moment of outbreak, and perhaps includes darkness before the eyes, etc., but then completely ceases." The description of some of the symptoms usually found in cases of mania, as given by W. Bevan Lewis, is also fairly comparable with Dr. Crombie's account of the special features presented by cases of insanity produced by the long-continued immoderate use of ganja. "The excitant swell of feeling and the torrent of disconnected ideas may express themselves in continuous garrulity, in noisy chattering, in threatening and abusive tones, in laughter, in singing, or loud shouting with corresponding pantomime and almost ceaseless activity, or the feeling of unusual freedom and energy may find relief in destructive tendencies, smashing of glass, breaking of furniture, tearing of clothing, or, perhaps, in violent aggressiveness." In regard to these lunatics being "very subject to relapses," it may be remarked that this also is recognized as a common feature in ordinary cases of mania.

Summary of conclusions regarding hemp drug insanity.

536. Summing up the evidence as to the presence of pathognomonic symptoms in cases of hemp drug insanity, the Commission consider that, with the exception perhaps of the shorter duration of such cases when compared with cases of ordinary mania, there are no symptoms by which the cause of the mental condition can be determined.

The determination of cause depends wholly upon history. The Commission also consider it not improbable that there are no typical brain lesions peculiar to hemp drug insanity, though definite lesions are doubtless present in chronic cases, as they are in cases due to other causes.

In answering the question, therefore, on what the evidence rests that hemp drugs may induce mental aberration, the Commission would offer the following remarks: The evidence may be considered under two heads—(*a*) popular; (*b*) scientific. The popular idea that the use of hemp drugs may induce insanity can be traced back for many centuries, and the present day views on the subject are no doubt the outcome of old popular ideas which have been handed down and become concrete. With non-medical witnesses the mere use of the drug along with the fact of insanity, as the evidence shows, has as a rule been accepted as cause and effect. Of the large number of medical witnesses who have given evidence before the Commission, probably not a single one has ever observed the inception of the habit and the use giving rise to mental aberration, and been in a position to gauge the value of other contributory causes if present. With practically no modern literature on the subject, with no special knowledge apart from the popular idea, with a very slight or no clinical experience of insanity in England, with the experience derived from perhaps having had half a dozen insanes in the course of two years under observation as Civil Surgeons, officers have been placed in charge of asylums, and have had to differentiate between cases of hemp drug insanity and ordinary mania. The careful inquiry which has been made by the Commission into all the alleged hemp drugs cases admitted in one year into asylums in British India demonstrates conclusively that the usual mode of differentiating between hemp drug insanity and ordinary mania was in the highest degree uncertain, and therefore fallacious. Even after the inquiry which has been conducted, it cannot be denied that in some of the cases at least the connection between hemp drugs and insanity has not been conclusively established. But taking these accepted cases as a whole, we have a number of instances where the hemp drug habit has been so established in relation to the insanity that, admitting (as we must admit) that hemp drugs as intoxicants cause more or less of cerebral stimulation, it may be accepted as reasonably proved, in the absence of evidence of other cause, that hemp drugs do cause insanity.

The action of hemp resin, the active principle of all forms of the drug, when taken internally, has formed the subject of accurate experimental observations, and the physiological action of the drug on the human subject and animals is fairly well known. When, however, the products of the destructive distillation of the resin are inhaled, as in ganja smoking, the precise physiological effects induced have not hitherto been, so far as the Commission are aware, as fully studied. Dr. Russell's experiments (Bengal witness No. 105) already quoted are, the Commission understand, the only ones instituted on man with any pretensions to scientific accuracy. On the other hand, Assistant Surgeon Bocarro (Sind witness No. 20) and others refer from careful actual observations to the general physiological effects induced by smoking ganja and charas. With the object of elucidating the physiological effects of the products of the destructive distillation of hemp resin, Dr. D. D. Cunningham, F.R.S., Professor of Physiology, Medical College, Calcutta, at the request of the Commission, kindly undertook a

series of experiments on monkeys. A full account of the experiment with ganja is given in paragraph 483. Dr. Cunningham reports on naked-eye inspection that "the cerebro-spinal nervous centres were all apparently perfectly healthy." The results of the histological examination are not before the Commission, but it is hoped that they will be received in time to be included in the appendix. So far as the information from all sources before the Commission is concerned, there is no evidence of any brain lesions being directly caused by hemp drugs, as they have been found to be caused by alcohol and dhatura; and there is evidence that the coarse brain lesions produced by alcohol and dhatura are not produced by hemp drugs.

537. The precise physiological effects induced by the inhalation of the products of the destructive distillation of hemp resin and those arising from the exhibition of the resin by the stomach are probably not identical, but in both cases there is ample evidence that the use of the drug in either form may first cause cerebral stimulation, and then depress the functional activity of the brain. François Franck and Pitre's experiments (Arch. de Physiol., 1883), quoted by Lauder Brunton, indicate that in the case of dogs the excitability of the brain is increased by the administration of *Cannabis*, a purified form of hemp resin, so that the tendency to epileptic convulsions is greatly increased, and may be induced by very much slighter stimuli than usual. Alcohol is a typical cerebral stimulant, and any drug which, like alcohol, increases the functional activity of the brain, may, like alcohol, give rise to what is technically known as "an intoxication." The effect of alcohol may result in three principal sets of symptoms, which are admirably set forth by Legrain (Dictionary of Psychological Medicine).

Cerebral stimulants.

(*a*) Taken in large amounts, in a short time it produces acute symptoms, which are immediate, but temporary—*intoxication* or *drunkenness*.

(*b*) Alcohol if taken often and in great quantities, or if the drunkenness is nearly continuous, or if the individuals are not very strong in brain, accumulates in the organism without being at any time completely eliminated, and gives rise to acute symptoms of longer duration than mere intoxication—*delirium tremens*.

(*c*) Alcohol regularly or irregularly introduced into the system for a long time in doses even short of producing immediate symptoms is known to produce general disorders and progressive lesions, characterized by weakening of the faculties and premature dementia, the *ensemble* of the symptoms constituting *chronic alcoholism*.

The analogues of these chief effects of alcohol may also be traced in the symptoms induced by hemp drugs, in which we have—

(*a*) The condition of more or less delirium with hallucinations and merriment as occurring in a person who has taken what is to him a large dose of the drug, the symptoms being only temporary—*hemp drug intoxication*.

(*b*) The condition of wild frenzy, with symptoms of transitory mania occurring in a person who has systematically indulged largely in the drugs—*hemp drug delirium*.

(c) Cases in which the drug has been used for a considerable period, and then given rise to mania of shorter or longer duration, or cases in which the symptoms of hemp drug delirium do not completely subside, but pass on into a state of mania usually curable, and thus indicating the probable absence of anatomical lesions—*hemp drug mania.*

The evidence, though by no means clear and decisive, is perhaps sufficient to justify the presumption of an analogy such as is above indicated; and cases which have come before the Commission have seemed to divide themselves into these three classes. At the same time it must be pointed out that the sharp line of demarcation in symptoms which separates alcoholic intoxication from delirium tremens does not separate the intoxication and delirium produced by hemp drugs. Further, in regard to what has been said about hemp drug mania, it may be noted that it is not improbable, though it has not been established by evidence, that prolonged abuse of the drugs may give rise in some cases to definite brain lesions resulting in a progressive weakening of all the faculties leading to dementia.

Legrain's description of poisons of the mind.

538. Hemp drugs have been classed among the "poisons of the mind," and it may be of interest, as throwing a good deal of light on the whole subject and explaining the different modes in which "intoxications" may give rise to altered mental states, to allude briefly to the manner in which mental poisons are presumed to act. M. Legrain, in Hack Tuke's Dictionary of Psychological Medicine, defines mental poisons as including all substances, whatever may be their origin and nature, which are capable of exercising a marked action on the intellectual processes, either by disordering them or by suspending them completely for a moment or longer. He then goes on to describe their action at length in a passage which may be summarized as follows. Poisons of the mind act primarily to a greater or less extent on the cerebral cells. Almost all substances introduced into the organism modify the cerebral processes, this being due to the delicacy of the organization of the nervous system, which, like all complicated mechanism, is extremely vulnerable. The brain as the terminus of all sensations, and as the regulator of even the most minute cellular functions, has to bear the brunt of attacks, even the slightest, directed against the vital equilibrium, and has also to re-act in order to re-establish this equilibrium. In every intoxication, in addition to the cerebral re-action due to the effect of the poison itself, there are other re-actions requiring as many reflexes for the defence of the body, and closely connected with the impressions which the sensorium receives, of modifications of nutrition, or of changes which take place in other organs under the influence of the poison. These re-actions are the symptoms common to every intoxication. The cerebral re-actions which take place under the more direct influence of the toxic substance are of two kinds—they may be diffused, general, and undefined, and expressed by vague symptoms, indicating a lesion of the brain as a whole; or they are well-defined, clear, and localized, indicating that the poison affects one special centre of the brain to the exclusion of all others. Special derangements may also occur in addition to those of the brain. In spite of the great dissimilarity of the substances which are capable of producing cerebral intoxication, there are nevertheless certain clinical features common to all. We might even say that there are no intellectual disorders more pathognomonic of one poison than of another. The artificial insanity produced by toxic substances is nothing but the

re-action of the cerebrum, which is arrested in its full and regular function, and the coming into play of the cellular elements under the influence of an external and abnormal excitation which is different from the usual stimulation. As already pointed out, this excitation may affect one part of the brain more than another; hence the apparent difference in the symptoms, which may also vary in different individuals, although they are under the influence of the same poison. The toxic substance does not add any new element to those which the normal brain possesses, and herein lies the great difference between the superadded insanity and the insanity which the brain produces itself between toxic derangement and psychosis. All or nearly all slight intoxications, from whatever cause, are characterised by certain general symptoms—(1) excitation of the organ of thought; (2) intoxication; and (3) incoherence of ideas and actions. In organic derangement there is a qualitative ideational alteration; in toxic derangement there is only a functional disturbance, and a quantitative modification of psychical expression. The special symptoms are of infinite variety, and this variation of the special phenomena depends upon two factors—(*a*) the localization of the toxic effects in a special cell group in the brain; and (*b*) on individual re-action. Nervous and predisposed persons appear to be more easily affected than normal subjects. Certain toxic substances, such as alcohol and morphia, etc., do not produce the same effects on all individuals, male or female, under all latitudes. A large number of substances produce cerebral effects, but rarely in consequence of certain individual dispositions. Among labourers who handle carbon disulphide or aniline, some only present mental disorders. The individual factor with its idiosyncrasies plays here, as everywhere, a very important part. There are other factors, too, which have to be considered, the degree of education, reason, locality, dosage, and mode of preparation of the drug, all of which may modify the symptoms. Thus the hallucinations of the Western people under the influence of hashish are not identical with the voluptuous dreams of the Orientals. The simple intellectual disorders produced by various poisons are of two kinds—(1) the condition of excitement, and (2) the condition of depression; but these two conditions do not exclude each other. Thus in the case of hemp drugs, depression or narcosis usually follows the initial excitement. In addition to the intoxication and general disturbance of the mind, mental poisons produce also insane conditions or mental disorder. But these conditions are intimately connected with the general disturbance of the mind. The individual variations are here very numerous, the same poison producing different effects in two individuals. The insane conditions have been classed into several groups—(1) maniacal or incoherent type is the most frequent, the derangement being absolutely general; (2) alcoholic type, a maniacal condition of a depressive, painful, and frightful form; (3) maniacal type of expansive form, ambitious, mystic, and erotic ideas, idea of self-satisfaction and of exaggeration of personality—this form is considered as representative of hashish, etc.; (4) melancholic type; (5) mixed forms in which depression may alternate with excitement; and (6) vesaniæ conditions, *i.e.*, attacks of insanity, which, although excited by poisons, do not derive their special colour or character from the drug, but arise in persons strongly predisposed to insanity. Most poisons produce nothing but temporary disorders, which disappear without leaving any trace behind: their effect is limited to a slight excitement on depression of the faculties, to a short intoxication, or to a more or less profound narcosis; afterwards perfect order is re-established. Other poisons cause more serious symptoms. The duration of symptoms varies according to the individual disposition and the dose absorbed;

but, generally speaking, the acute stage, if recovery should follow, does not last more than a few days or weeks. In chronic voluntary intoxication the cause of the symptoms depends necessarily on the habits of the patient and the individual re-action. The chronic period does not generally establish itself from the first. There are first the acute phenomena, which may reproduce themselves a number of times, without, however, preventing chronicity from establishing itself: these acute symptoms are nothing but epiphenomena, which appear again and again in the course of this period : the two essential kinds of symptoms, however, are the irresistible appetite for the poison, with periodical return of the acute and sub-acute symptoms, and the progressive decay of the mental faculties. The acute symptoms correspond to the temporary saturation of the body with the poison, while the chronic symptoms are the expression of definite anatomical lesions in the brain gradually developed under toxic influence. The prolonged use of mind poisons thus gives rise to progressive weakening of all the faculties passing over into dementia. Acute toxic insanity is a secondary insanity: it is polymorphous; all forms of insanity may be observed, not only in two different intoxications, but even in the course of one and the same intoxication. It is temporary, nothing but a momentary acute effervescence terminating with the elimination of the poison.

Intoxication and insanity.

539. Before leaving the subject of insanity, there is one point to which it seems desirable briefly to allude. The impression left on the minds of the Commission by the perusal of a large number of records in criminal cases and by the examination of some asylum cases is that there is occasionally seen a tendency to confound intoxication and insanity in connection with hemp drugs. The result is that in some cases men who should have been simply punished for being intoxicated have been sent to the asylum, and, though sane when they reached that institution, have been detained there. These cases are, however, much rarer than they used to be, if one may judge from the old asylum reports. A more serious result of this confusion is that there are cases in which men who have committed offences, especially crimes of violence, under the influence of hemp drugs have been acquitted on the ground of insanity, although the circumstances have been such that had the intoxicant been alcohol, they would have been convicted. It is undoubtedly more difficult in the case of ganja than in the case of alcohol to recognize the line drawn for social and legal purposes between intoxication and insanity. But the difficulty is not insuperable. The main reason for the confusion that has existed is probably the ignorance that has prevailed regarding hemp drugs. When they are recognised as a common intoxicant, it is to be hoped that the practice of the Courts will be freed from the occasional blemishes above indicated. It is not expedient, nor is it just, that intoxication from hemp drugs should secure immunity from punishment which is not allowed to alcohol; and, on the other hand, the Commission cannot concur with Dr. Walsh (Bengal witness No. 112) when he says: " It is not my opinion from experience that it is either dreadful in itself or possibly disastrous to a man's mind to have to herd for years with lunatics, though sane."

CHAPTER XIII.

EFFECTS—MORAL: GENERAL SUMMARY OF CONCLUSIONS.

Social effects.

540. Hitherto the effects of hemp drugs have been considered principally with reference to consumers themselves. In turning now to the discussion of their moral effects, we shall practically consider briefly their direct effects on society. Are consumers offensive to their neighbours, and is there any connection between hemp drugs and crime? These are the questions which it is proposed now to discuss. A considerable mass of evidence has been collected on these questions.

Are consumers offensive to their neighbours?

541. As to whether moderate consumers are offensive to their neighbours the evidence can leave little doubt on the mind of any one who peruses it carefully. About seven hundred witnesses have thought it worth while to speak on this point. It may be safely presumed that of the remainder the great majority have no experience of anything offensive in consumers. Of those who have given their opinions, over six hundred say that moderate consumers are not offensive to their neighbours. Of the small minority, some object, not unnaturally, to the bad example they think their ganja smoking neighbour may be to their sons who are growing up. Some merely take offence at the smell of the ganja smoke, and some at the "coughing and expectorating." They are evidently not inclined to be tolerant of the indulgence which they do not care themselves to practise. On the other hand, some of the minority are clearly dealing not with moderate consumption, but with the worst type of excess. They speak vaguely of the consumers as committing the gravest crimes under the influence of these drugs. Altogether it is clear that the moderate consumer is as a rule perfectly inoffensive. There appear to be quite adequate grounds for accepting the statement of those who assert that as a rule he "cannot be distinguished from the total abstainer." Some witnesses have stated that they had difficulty in finding the moderate consumers, though they did find that the habit of moderate consumption is common. Indeed, there are not wanting those who say that no consumer of bhang or ganja, whether in moderation or in excess, is ever an offensive neighbour. The contrast in this respect between the excessive consumer of hemp drugs and the excessive consumer of alcohol is frequently emphasized. No doubt the excessive consumer of hemp drugs must sometimes be a disagreeable and perhaps even dangerous neighbour; but even among excessive consumers such cases seem to be very rare indeed.

Connection of hemp drugs with crime.

542. In discussing the connection of hemp drugs with crime, it is necessary to discriminate between any effect which they may be supposed to produce on crime in general and the unpremeditated crimes of violence to which intoxication may give rise. Thus there are those who allege that the habitual use of alcohol, at all events if carried to excess, degrades the mind and character of the consumer and predisposes him to crime in general, or to crimes of a particular character, especially to offences against property. Drink is thus set down sometimes as one of the most efficient agencies for increasing the criminal classes. On the other hand, there are well known cases in which intoxication from alcohol has led to crimes of an occasional and exceptional character, generally to unpremeditated crimes of

violence or other unpremeditated offences against the person. These two classes of cases should be carefully distinguished and treated separately.

Bad characters.

543. The first question then is whether any large proportion of bad characters are habitual consumers of hemp drugs, and whether there is any general connection between such consumption and crime. About one-half of the witnesses have dealt with this question. Of these, a majority of two to one hold that no large proportion of bad characters are moderate consumers. A majority, but not quite so large, have the same opinion regarding excessive consumers. In respect to the second part of the question, a majority of eight to one hnld that moderate consumption of these drugs has no connection with crime in general or with crimes of any particular character. A majority of nearly four to one hold the same view in regard to excessive consumption. There is one witness who makes rather a suggestive observation in this connection. He says that consumers "are called badmashes for this reason only, that our children may fear them and avoid their company." This undoubtedly suggests an explanation of some part of the popular condemnation of the drugs. A very large proportion of the natives of this country have a strong aversion to the use of intoxicants, and may reasonably be expected to influence their children against them in precisely this way. This may lead some witnesses to take an exaggerated view of the number of bad characters who are consumers. But there need be no hesitation in accepting the view that this number is indeed larger in proportion than the number of consumers among the general population. Consumers of hemp drugs are found more among the lower orders, among the poor, than among the more wealthy. The former are, of course, the classes to which the badmashes or bad characters belong. This is the explanation given by many witnesses of the alleged fact that proportionately more consumers of hemp drugs, and especially ganja smokers, are to be found among bad characters than among the whole population. But the general opinion is that hemp drugs have *per se* no necessary connection with crime. It is true that some witnesses assert that habitual consumers sometimes spend more than their poverty renders reasonably possible, and are then tempted to commit petty thefts. And there are probably many Magistrates of experience who have in "bad livelihood cases" heard the police enlarge on the amount believed to be spent on hemp drugs and other intoxicants and the apparent impossibility of meeting this expenditure honestly. The same is true, however, of any unwise expenditure beyond what one can afford, and of any extravagance which intensifies poverty.

Do criminals fortify themselves with these drugs?

544. Another question which arises in reference to the connection between hemp drugs and crime is whether these drugs are to any considerable extent taken by criminals to fortify themselves to commit premeditated crime of any kind. About one-half of the witnesses speak on this point. Of these a majority of nine to four answer in the negative. The truth seems to be that as hemp drugs help the consumer to endure great fatigue or exposure and stimulate him to unwonted exertion, criminals, like any other consumers of these drugs, go to them for that assistance when they feel that they require it. This is just as any man under similar circumstances might go to the intoxicant he was in the habit of using. Sometimes, no doubt, also a criminal may take his own particular

intoxicant to supply Dutch courage. But it seems just as common with him to desire to keep his head clear, and therefore to avoid all intoxicants. No man, of course, who was not unaccustomed to the use of hemp drugs would turn to them for any of these purposes. There would be too great a risk of the unaccustomed intoxicant disabling rather than nerving the man. There is one class frequently mentioned in some parts of the country by whom the drugs are no doubt used, *viz.*, "lathials" or professional clubmen, who are employed occasionally as mercenaries in riots and assaults. These men, like many wrestlers, use the drug habitually, and no doubt indulge in it before going out on their work.

Do criminals administer them to their victims?

545. About the same number of witnesses deal with the question whether criminals use hemp drugs to stupefy their victims. By a majority of about three to two, they answer this question in the affirmative. The question arises whether complete or sufficient stupefaction can be induced by the administration of these drugs. There seems to be considerable doubt on this point. It is a very general opinion that only persons unaccustomed to the drugs could be rendered insensible by them, and such persons would not take the drugs. No doubt ganja might be administered in a *chillum* with the pretence that there was nothing there but the tobacco with which it was mixed. But this as a rule would involve too much risk. Ganja would be too readily detected by smell and flavour. Many even of those who believe that hemp drugs could produce sufficient stupefaction speak also to the admixture as a general rule of more potent drugs, such as dhatura. As to cases, it is far easier to get many established cases of such stupefaction by dhatura alone than to get one where hemp drugs were clearly the narcotic employed. There are two special instances of this kind of use of hemp drugs mentioned by some witnesses, *viz.*, thefts of ornaments from prostitutes intoxicated with bhang, and thefts of ornaments from children stupefied by majum sweetmeats. These, however, do not appear to be common. It is difficult to get instances of any such use of these drugs. The evidence in support of the view that they are so used is largely hearsay and based on mere rumour. On the whole, it is very improbable that the drugs are much used in this way; for dhatura, a much more potent drug, is more easily available and more easily administered.

Evidence that excessive consumption is not connected with unpremeditated crimes, especially crimes of violence.

546. There seems, therefore, good reason for believing that the connection between hemp drugs and ordinary crime is very slight indeed. There remains for discussion their alleged connection with unpremeditated crime, especially crimes of violence. In this connection it seemed only necessary to consider the excessive use of the drugs. This, then, was the question put before the witnesses, whether excessive indulgence in any of these drugs incites to unpremeditated crime, and whether they knew cases in which it had led to temporary homicidal frenzy. This question has been discussed by nearly six hundred witnesses, of whom a majority of very nearly three to two answer in the negative. They do not believe in any such connection. Their experience has not brought before them cases in which that connection seemed to exist. Some of them have clear recollection of crime being associated by causation with alcohol, but cannot recall any case in which it was similarly associated with hemp drugs. They will not go beyond their experience, and therefore they answer in the negative.

Some of them go further than this. They go so far as to say that these drugs not only do not incite to crime, but have the very opposite tendency. They are of opinion that the drugs "tend to make men quiet;" that "the immediate effect is stupefying; there is none of that tendency to violence which is a characteristic of alcoholic intoxication;" and that the result of continued abuse of the drugs is to make a man "timid and unlikely to commit crime." These last statements cannot be accepted as generally true. No doubt the drugs may sometimes have these sedative effects, though a number of witnesses speak to habitual use producing irritability. Any one who has extensively visited ganja shops or places where consumers congregate must be struck with the perfect quiet which prevails in the great majority, and with the slothful, easy attitude of the consumers. These are not, however, the invariable effects of hemp drugs. Undoubtedly the excessive use does in some cases make the consumer violent. It is probably safe to say in view of all the evidence that the tendency of the drugs often seems to be to develop or bring into play the natural disposition of the consumer, to emphasize his characteristic peculiarities, or to assist him in obtaining what he sets his mind on. If he aims at ease and rest and is let alone, he will be quiet and restful; but if he is naturally excitable and ill-tempered, or if he is disturbed and crossed, he may be violent. This may be accepted perhaps as generally true if allowance be specially made for the fact that excess in the use of these drugs tends to show and to develop inherent weakness of character. At the same time the fact that so many witnesses testify to the peaceable and orderly character of the excessive consumers goes far to prove that in this country experience shows that as a rule these drugs do not tend to crime and violence.

Evidence to the contrary.

547. This impression is intensified by the consideration of the statements made by some of the witnesses who constitute the minority. Mr. D. R. Lyall (Bengal witness No. 1), who has had thirty-two years' varied experience as a Revenue Officer and Magistrate, says: "I have known cases of temporary homicidal frenzy;" but in his oral examination he says: "I can give no examples to illustrate my answer." This is precisely the position occupied by many of the most experienced witnesses. They have a more or less vague impression that hemp drugs and violent crime have been occasionally associated, but they cannot recall cases. A few testify to having searched the criminal records or police reports for years back in vain. As Mr. Westmacott (Bengal witness No. 2) says in his written paper: "I do not at this moment remember a case, but I have an impression that there are such cases." This is a witness typical of a class.

There are other witnesses who speak less cautiously of "many cases," but cannot give information about any. Thus Mr. Williams (Bengal witness No. 18) speaks of "innumerable cases of homicidal frenzy." But his remark "is merely based on newspapers;" and he knows only one case which occurred at Calcutta while he was at Darbhanga, and of which his knowledge is "entirely hearsay." Similarly, Mr. W. C. Taylor (Bengal witness No. 36), an uncovenanted officer of forty-seven years' experience, speaks of "numerous cases," but can only recall one—surely a doubtful case—in which an attack was made on a party, of which he was a member, by a Sonthal in the Sonthal rebellion of 1856. Similarly, the Inspector-General of Police in the Central Provinces

states that "running *amok* is always the result of excessive indulgence" in hemp drugs; but under cross-examination he says: "I have never had experience of such a case. I only state what I have heard." These witnesses also are typical of a considerable class, who refer to hearsay, to rumour, and to newspapers as the basis of their opinion.

Many others, like Mr. Cooke, Commissioner of Orissa (Bengal witness No. 8), base their opinion on what they have heard of the history of criminal lunatics in asylums, and really speak only of acts of violence due to mania. One witness exposes this fallacy very simply: "I have never seen any instance of unpremeditated crime committed by a consumer, except that mad men sometimes grow violent." Such cases are clearly irrelevant to the question immediately under discussion. But there are a good number of witnesses who thus confound cases of violence occurring in the course of established insanity with unpremeditated crime incited by drugs. Instances are thus given of acts of violence committed in the asylum where the lunatic is confined. Some witnesses are even content to quote the fact of mania characterized by violence without any particular offence being committed as establishing this alleged connection between hemp drugs and violent crime.

Some witnesses again base their opinion on a purely casual connection between the use of the drugs and the commission of crime. Thus Mr. Hugh Fraser (North-Western Provinces witness No. 8) spoke in his written paper of many crimes "committed under the influence of ganja." In his oral examination he asked that the word "while" should be inserted; and added: "I do not attribute the crime to the consumption of the drug. I cannot recall the details of any of these cases." This is certainly very different from the impression which his written answer conveyed. A Bengal witness goes even further in this direction. He says: "I know of two cases in which two ganja smokers committed murders, one for gain, and the other in heat of provocation."

There is another class of witnesses who do not profess at all to require any basis of fact for their opinion. They speculate on the probabilities. They are content to reply that hemp drugs "weaken the brain and may lead to crime," or "I can imagine their doing so in the same way as excess of alcohol in an individual of a naturally violent temperament, but not in a peaceful subject."

Cases referred to.

548. All this tends greatly to lessen the weight of the evidence in support of the affirmative answer to this question, and to strengthen the impression that it is but rarely that excessive indulgence in hemp drugs can be credited with inciting to crime or leading to homicidal frenzy. All witnesses have been asked whether they know of cases of homicidal frenzy. The cases quoted are, however, very few. They have all been carefully considered by the Commission. As already stated, a few witnesses have mentioned cases which are admittedly mere outbreaks of established insanity. These cases are excluded. Two Punjab cases mentioned by Colonel Tucker (witness No. 28) and Mr. C. Brown (witness No. 29), in which Ghazis and Kukas are stated merely to have fortified themselves by bhang for a fanatical attack on their enemies, have also been excluded. Finally, four cases which occurred beyond British territory in feudatory states have also been excluded. With these exceptions, all the cases mentioned by witnesses answering question 53 have been abstracted and compiled in a tabular form in Vol. III Appendices.

They are divided into two classes—*viz.*, (i) those cases of which the records have not been called for; and (ii) those cases of which the records have been examined by the Commission. In every case in which the records have been examined, a note containing the result of that examination has been appended to the evidence of the witness who referred to the case. The number of the witness entered in the statement contained in the appendix will facilitate reference to the particular note dealing with the case.

Cases in which the record has not been called for.

549. There are 58 cases belonging to the first class and 23 cases of the second. This gives a total of 81 cases mentioned for the whole of India. Taking first the fifty-eight cases constituting class (i), it is interesting to notice that out of such of these cases as have dates assigned, no fewer than eleven are over twenty years old. One European witness has to go back to 1856 before he can find in his long experience any case of violence attributable to hemp drugs, and two native witnesses recall instances over forty years old. This serves to show that these cases are drawn from a long period of years as well as from the whole of India. It is also interesting to notice that seventeen of these cases are attributed to sepoys and armed police, to whom great temptation to violence presents itself when they are suddenly or seriously provoked. Ten other cases are attributed to persons of the fakir or religious mendicant class. The following sentences from Mr. Maconachie's judgment in the case shown as No. 71 on the list are of interest in this connection: "Accused was at the time excited with bhang; and even now at his trial he has a daring and violent manner, which shows plainly his disposition. He is one of those roaming fakirs who, when they get excited by their favourite potations of bhang or charas, are utterly lawless, and are fit to be treated as enemies of society."

Deducting these twenty-seven cases, there remain only thirty-one of this class adduced as evidence of the effect which hemp drugs have on the people generally in leading to violent and unpremeditated crime. These cases cannot be very fully examined, as the Commission have not had the records before them. But the statements of the cases by the witnesses themselves show that several are merely cases of the rowdyism of intoxication; that there are several where the motive for the crime is quite adequate without looking to hemp drugs; and that there are not a few that have been put down to hemp drugs for no other reason than that the offender was a consumer. In one case the witness has held it sufficient to say that the man was under the influence of some drug.

Cases in which the records were examined.

550. The Commission called for the records in twenty-three cases in which the records were clearly traceable and easily obtainable. These cases were selected at haphazard simply on this ground. An abstract of what the records contain in each case will be found appended to the evidence of the witness quoting it. The examination of these cases tends greatly to weaken the force of the impression, even such as it is, created by the perusal of the cases of the first class. They may now be briefly discussed in detail. In case No. 59 a police officer informed the Commission that a ganja smoker suddenly murdered a vendor because he would not give him more of the drug. The facts were that the man had his knife in his hand as he was eating fruit; that in an altercation with the vendor the latter first dealt him a

blow with a split bamboo; and that the other then turned on him with his knife. The principal circumstances of the case and the real provocation are lost sight of by the witness. This case cannot be regarded as due to hemp drugs. This witness, second case (No. 60), is defective in a somewhat similar manner, inasmuch as he fails to point out that the man sought to murder his wife because she had given evidence against him. This is unfortunately too often found to be an adequate explanation of such a crime as this. Though the man was a ganja smoker, there is no proof that he was under the influence of the drug at the time. There is no mention of ganja in the record.

The next witness is Dr. Crombie, who is a member of the Committee for advising Government about criminal lunatics. He stated that he was unable, however, to give specific cases, but had one case clearly in his mind. This case he had also quoted before the Opium Commission as a case of running *amok* from ganja. He stated the case thus: "A Bengali babu, as the result of a single debauch, in an attack of ganja mania slew seven of his nearest relatives in bed during the night." A perusal of the records indicates that this statement of the case is wholly inaccurate. There is indeed mention of the man having used both ganja and opium. But there is no mention of a debauch, and there is mention of habit. So that the conception of "a single debauch" is quite opposed to the history contained in the records. The judicial record shows that the man had been for years peculiar in his behaviour; that about six years before he had become quite mad for a time on his wife's death; that on the present occasion a similar outbreak of madness had occurred on his mother's death; that he "did not take ganja during this time;" that the murders were committed on the night of his mother's *Shradh*, about which there had been "a commotion" during the day; and that the motive seemed to be mere insane despair as to how these members of the family could be cared for in the future. The asylum papers indeed mention "his mother's death as well as addiction to ganja and opium" as the cause of insanity. But the papers afford no clue as to the origin of Dr. Crombie's view of the case.

The next five cases are three mentioned by Mr. Marindin (Collector, Bengal) and two by Mr. Dalrymple Clark (District Superintendent of Police, Assam). These witnesses did not profess a detailed knowledge of these cases, but merely suggested that the records should be consulted as the cases seemed to be such as the Commission desired to see. But the records show that no satisfactory connection between hemp drugs and crime was established in any of these cases.

Dr. Mullane, a Civil Surgeon in Assam, mentions two cases in which he thinks the crime was associated with ganja. The first (No. 67) is a case in which a religious mendicant murdered a guest in the middle of the night. Under these circumstances it is impossible to say with anything like confidence what really occurred. But the evidence does point to the crime having been committed under the influence of ganja. In his second case (No. 68), however, Dr. Mullane is incorrect in his facts. The man did wound some people; he apparently did not kill any one. He never took ganja, though he took liquor and opium. The Judge found that he was not under the influence of any intoxicant at the time of the offence.

Mr. Moran, an Assam Tea Planter, gives the next case (No. 69). It is instructive to note that though the case occurred on his own estate, and he was

a witness at the trial, Mr. Moran's memory does not serve him well in regard to the facts. His present account of it differs most materially from that given at the time. The record is clearly against any connection between the crime and ganja, which Mr. Moran did not then mention at all. The only remaining Assam case (No. 70) seems from the papers to have been clearly a liquor case, and in no way connected with hemp drugs.

The two Punjab cases seem both to illustrate the connection between hemp drugs and crime. The first (No. 71) has been already quoted as indicating the character of the fakirs to whom so many of these cases of violent crime are attributed. The second (No. 72) is a very interesting case. The records showing the efforts which have been made by the Punjab Government to make the Khosa tribe give up the excessive use of intoxicants well repay perusal. If these tribesmen can be persuaded to see the evil effects which have resulted from this excess and to abjure the drugs they use without turning to others, the Government will deserve congratulations on the results of a somewhat exceptional line of action.

The next case (No. 73) is given by Colonel Chrystie, a Deputy Inspector-General of Police in Madras, and is referred to by several other witnesses. A peon having been fined is said in his irritation to have taken a considerable amount of ganja, and to have then rushed out with a club. He struck a boy, and then ran along the public road until he met an old man whom he beat to death, alleging afterwards that he had killed a black pig. The connection between the crime and ganja was accepted by the courts at the time; but doubt is cast on this case by the fact that this man was afterwards found to be subject to recurrent insanity, several violent outbreaks of which were manifestly independent of any drug. This is one of the accepted cases for 1892 in the Madras Asylum.

The next three cases (Nos. 74 to 76) were referred to by Mr. Stokes, a Madras Collector, as having been mentioned to him by a Police Inspector as ganja cases. But a perusal of the records shows that there is no adequate reason for connecting these murders with hemp drugs. The last Madras case (No. 77) is a strange one. A father first cruelly burned his child; and, when the child cried, it occurred to the father as it was a feast day to offer the child to the god. He did so, killing the child and lapping up the blood. There was evidence that the man was under the influence of ganja (bhang) which he had smoked. The High Court adopted this view and sentenced him to transportation for life.

The next case (No. 78) is one in which certain Talavias organized a riot in the town of Broach, in the course of which Mr. Prescott, District Superintendent of Police, was killed. Mr. Cappel, the Collector, gives a full account of the details of this disturbance, and shows that it cannot be reasonably connected with hemp drugs.

The next two cases were mentioned by Mr. Sinclair, Collector of Thana. The first (No. 79) is the case of a servant who is alleged to have attempted to throttle his master's wife as she was sleeping by her husband at night. He is said to have been under the influence of ganja, and the records bear out this

view. In the second case (No. 80), Mr. Sinclair seems to be doubly mistaken. In the first place, the Magistrate acquitted the accused because it was not proved that he had committed the acts constituting the alleged offence, and, in the second place, the man's insanity was attributed to other causes than ganja.

The last case (No. 81) was given by Colonel Humfrey, Inspector-General of Police, Bombay. Colonel Humfrey was engaged in the arrest of the sepoy in this case; yet his recollection of the facts was not quite accurate, and led him to make the connection between the crime and bhang closer than it really was. He did not, however, actually attribute the crime to the drug. The judgment of the High Court is very clear, and shows that the murderous use of his rifle by this sepoy was deliberately planned, was due to revengeful feelings against the policeman, and was not due to the influence of bhang.

Results of the examination of these cases.

551. Of these twenty-three cases then, the records in not less than eighteen show that the crimes cannot be connected with hemp drugs. There is one case on which doubt is thrown by subsequent discoveries. The connection between hemp drugs and crime is only established in the remaining four. It is astonishing to find how defective and misleading are the recollections which many witnesses retain even of cases with which they have had special opportunities of being well acquainted. It is instructive to see how preconceived notions based on rumour and tradition tend to preserve the impression of certain particulars, while the impressions of far more important features of the case are completely forgotten. In some cases these preconceived notions seem to prevail to distort the incident altogether and to create a picture in the mind of the witness quite different from the recorded facts. Some of the witnesses whose memories have thus failed them are men who might have been expected to be careful and accurate. Their failure must tend to increase the distrust with which similar evidence, which there has been no opportunity of testing, must be received.

Summary of conclusions regarding effects.

552. The Commission have now examined all the evidence before them regarding the effects attributed to hemp drugs. It will be well to summarize briefly the conclusions to which they come. It has been clearly established that the occasional use of hemp in moderate doses may be beneficial; but this use may be regarded as medicinal in character. It is rather to the popular and common use of the drugs that the Commission will now confine their attention. It is convenient to consider the effects separately as affecting the physical, mental, or moral nature. In regard to the physical effects, the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all. There may be exceptional cases in which, owing to idiosyncracies of constitution, the drugs in even moderate use may be injurious. There is probably nothing the use of which may not possibly be injurious in cases of exceptional intolerance. There are also many cases where in tracts with a specially malarious climate, or in circumstances of hard work and exposure, the people attribute beneficial effects to the habitual moderate use of these drugs; and there is evidence to show that the popular impression may have some basis in fact. Speaking generally, the Commission are of opinion that the moderate use of hemp drugs appears to cause no appreciable physical injury of any kind. The excessive use does cause injury. As in the case of other intoxicants, excessive use tends to weaken the constitution and to render the consumer more susceptible to disease. In respect to the particular diseases which according to a considerable number of witnesses

should be associated directly with hemp drugs, it appears to be reasonably established that the excessive use of these drugs does not cause asthma; that it may indirectly cause dysentery by weakening the constitution as above indicated; and that it may cause bronchitis mainly through the action of the inhaled smoke on the bronchial tubes.

In respect to the alleged mental effects of the drugs, the Commission have come to the conclusion that the moderate use of hemp drugs produces no injurious effects on the mind. It may indeed be accepted that in the case of specially marked neurotic diathesis, even the moderate use may produce mental injury. For the slightest mental stimulation or excitement may have that effect in such cases. But putting aside these quite exceptional cases, the moderate use of these drugs produces no mental injury. It is otherwise with the excessive use. Excessive use indicates and intensifies mental instability. It tends to weaken the mind. It may even lead to insanity. It has been said by Dr. Blanford that "two factors only are necessary for the causation of insanity, which are complementary, heredity, and stress. Both enter into every case: the stronger the influence of one factor, the less of the other factor is requisite to produce the result. Insanity, therefore, needs for its production a certain instability of nerve tissue and the incidence of a certain disturbance." It appears that the excessive use of hemp drugs may, especially in cases where there is any weakness or hereditary predisposition, induce insanity. It has been shown that the effect of hemp drugs in this respect has hitherto been greatly exaggerated, but that they do sometimes produce insanity seems beyond question.

In regard to the moral effects of the drugs, the Commission are of opinion that their moderate use produces no moral injury whatever. There is no adequate ground for believing that it injuriously affects the character of the consumer. Excessive consumption, on the other hand, both indicates and intensifies moral weakness or depravity. Manifest excess leads directly to loss of self-respect, and thus to moral degradation. In respect to his relations with society, however, even the excessive consumer of hemp drugs is ordinarily inoffensive. His excesses may indeed bring him to degraded poverty which may lead him to dishonest practices; and occasionally, but apparently very rarely indeed, excessive indulgence in hemp drugs may lead to violent crime. But for all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime.

Viewing the subject generally, it may be added that the moderate use of these drugs is the rule, and that the excessive use is comparatively exceptional. The moderate use practically produces no ill effects. In all but the most exceptional cases, the injury from habitual moderate use is not appreciable. The excessive use may certainly be accepted as very injurious, though it must be admitted that in many excessive consumers the injury is not clearly marked. The injury done by the excessive use is, however, confined almost exclusively to the consumer himself; the effect on society is rarely appreciable. It has been the most striking feature in this inquiry to find how little the effects of hemp drugs have obtruded themselves on observation. The large number of witnesses of all classes who professed never to have seen these effects, the vague statements made by many who professed to have observed them, the very few witnesses who could so recall a case as to give any definite account of it, and the manner in which a large proportion of these cases broke down on the first attempt to examine them, are facts which combine to show most clearly how little injury society has hitherto sustained from hemp drugs.

CHAPTER XIV.

THE POLICY OF HEMP DRUG ADMINISTRATION.

General principles regarding sumptuary laws and their application to India.

553. The question of prohibiting the growth of the hemp plant and the sale of ganja and allied drugs is one which stands in the forefront of the present inquiry. It has been remarked by a well known historian* that "no laws are of any service which are above the working level of public morality, and the deeper they are carried down into life, the larger become the opportunities of evasion." If these words are true as applied to England under a feudal system, they are much more true in the present day as applied to British India. The Government of this country has not grown out of the forces contained within it, but has been superimposed upon them, and the paternal system of government which may have been suitable in England during the sixteenth century, and in the initial development of some Indian provinces during the period immediately following their annexation, becomes purely visionary when public opinion is in process of formation and the needs of the people are year by year finding more ready expression. Occasionally, no doubt, the Legislature in India has anticipated a standard of morality not universally accepted by the people, as in the case of laws relating to infanticide or the burning of Hindu widows; but these measures were passed under an overwhelming sense of the necessity of correcting popular notions of morality in matters coming well within the sphere of Government, and in the assurance that in the course of time they could not fail to secure the assent of all intelligent members of the community. In the chapter of Mill's Political Economy which treats of the non-interference principle, a distinction is made between two kinds of intervention by the Government—the one authoritative interference, and the other giving advice or promulgating information. And the following remarks are made regarding the former: "It is evident, even at first sight, that the authoritative form of Government intervention has a much more limited sphere of legitimate action than the other. It requires a much stronger necessity to justify it in any case, while there are large departments of human life from which it must be unreservedly and imperiously excluded. Whatever theory we adopt respecting the foundation of the social union, and under whatever political institutions we live, there is a circle around every individual human being which no Government, be it that of one, or of few, or of the many, ought to be permitted to overstep: there is a part of the life of every person who has come to years of discretion within which the individuality of that person ought to reign uncontrolled either by any other individual or by the public collectively. That there is, or ought to be, some space in human existence thus entrenched around no one who professes the smallest regard to human freedom or dignity will call in question: the point to be determined is where the limit should be placed; how large a province of human life this reserved territory should include. I apprehend that it ought to include all that part which concerns only the life, whether inward or outward, of the individual, and does not affect the interests of others, or affects them only through the moral influence of example. With respect to the domain of the inward consciousness, the thoughts and feelings, and as much of external conduct

* J. A. Froude's History of England, 2nd Edition, Chapter I, page 57.

as is personal only, involving no consequences, none at least of a painful or injurious kind, to other people, I hold that it is allowable in all, and in the more thoughtful and cultivated often a duty, to assert and promulgate with all the force they are capable of their opinion of what is good or bad, admirable or contemptible, but not to compel others to conform to that opinion, whether the force used is that of extra legal coercion, or exerts itself by means of the law. Even in those portions of conduct which do affect the interests of others, the onus of making out a case always lies on the defenders of legal prohibitions. It is not merely a constructive or presumptive injury to others which will justify the interference of law with individual freedom. To be prevented from what one is inclined to, or from acting contrary to one's own judgment of what is desirable, is not only always irksome, but always tends, *pro tanto*, to starve the development of some portion of the bodily or mental faculties, either sensitive or active; and, unless the conscience of the individual goes freely with the legal restraint, it partakes, either in a great or in a small degree, of the degradation of slavery. Scarcely any degree of utility short of absolute necessity will justify a prohibitory regulation, unless it can also be made to recommend itself to the general conscience; unless persons of ordinary good intentions either believe already, or can be induced to believe, that the thing prohibited is a thing which they ought not to wish to do." These remarks have been given at length, because the Commission believe that they contain a clear exposition of the principles which should guide them in deciding whether the prohibition of the hemp drugs should be authoritatively enforced by Government.

The question of entirely suppressing all intoxicants.

554. Now, a certain number of persons (among whom may in all probability be reckoned the mover of the question in the House of Commons which led to the appointment of the Indian Hemp Drugs Commission) deem it to be the duty of the British Government to suppress the trade in all intoxicants in all the countries under its sway; and there are no doubt special circumstances in India which render it less impossible than in some other countries to consider even so drastic a policy. These are notably the general sobriety of its races and the feeling, popular as well as religious, which prevails against their use among a large section of the community. Even then no appeal in support of such a measure can be made to the public morality or practice of civilised nations at large, nor, so far as the Commission are aware, to any marked success attending the experiment in particular instances. In the exceptional cases in which the experiment has been attended with partial success (as in some of the American States), the reformation of the habit has become an object of desire to the majority of the people, and the enactment for promoting such reformation has presented itself less as a restrictive force than as an auxiliary agency.

Not laid before the Commission.

555. But the Commission are not called upon to pronounce on so wide an issue. It was not upon the basis of this general principle that the Secretary of State for India accepted the proposal made in the House of Commons, nor do the instructions issued to the Commission by the Government of India cover so wide a field. The question of prohibiting the production and sale of the hemp drugs in India has to be considered by the Commission apart from the general question, and such prohibition must be justified, if at all, on some more special ground than the mere fact that they are intoxicants.

556. Again, there are a certain number of persons whose evidence before the Commission points to the assumption that the case for prohibition of the hemp drugs has already been established in the records of the Government, and that further enquiry implies a wilful blindness to what has been abundantly proved by such records. A reference to Chapter XII of this Report will show how untrustworthy these records are in regard to the production of insanity by the use of the drugs—an aspect of the question which is of the utmost importance, and has formed the basis of nearly all the official opinion heretofore recorded against such use. And, after availing themselves fully of every opportunity of consulting the official literature on the subject, the Commission have arrived at the conclusion that it shows little originality, and that a very limited amount of personal observation has been made to do duty as the basis of large conclusions. The want of reliable data has been compensated by annual reiteration until the stamp of antiquity has secured for the opinions so expressed a large amount of acquiescence among officials who had neither the time nor the opportunity to examine the matter for themselves. So far, therefore, as the effects of the hemp drugs are concerned, the Commission have had to approach the subject as almost a *tabula rasa*, and, while availing themselves of the imperfect data previously collected, have endeavoured to avoid accepting any conclusions without a substantial foundation of well ascertained facts. The attitude, however, of the Government in regard to the question may be briefly described. So far back as 1798 an inquiry was made in Bengal regarding the quality of ten intoxicating articles—"opium, madak, ganja, subzi, bhang, majum, banker, charas, tobacco, and toddy—" with a view to determining whether it might not be advisable to prohibit altogether the sale of any of them. The conclusion arrived at, which was stated in a letter of the Board to the Governor-General in Council, No. 22, dated 29th May 1798, was to the following effect: "It appears that the original productions are as follows: Tobacco, opium, ganja, subzi or bhang, banker, and toddy, and that the three remaining articles are for the most part compositions of those here recited, as above mentioned. With respect to the drugs specified in the foregoing schedule, they are not for the most part represented as producing any very violent or dangerous effects of intoxication except when taken to excess; and, although the operation of them may be more powerful in their compound state, we apprehend it would be difficult to sanction the sale of the original productions, and to prohibit with effect the use of compositions of which they are susceptible; to which may be added that most of these articles, both as original productions and as artificial combinations, appear to be useful either in medicine or otherwise; for these reasons we do not deem it necessary to recommend that the sale of any of them be altogether prohibited, but shall proceed to state what appear to us the best means of restraining the use of them, and improving the revenue by the imposition of such taxes as are best adapted to the nature of the case."

The past history of the case how far to be relied upon.

A complete inquiry was made in 1871 from all provinces as to the effects of the several preparations of hemp; and if the result should call for any action in the direction of restricting them by enhancement of the duty or of limiting, or even prohibiting, the cultivation of the plant, the advice of the Local Governments was invited as to the expediency and practicability of such measures. The result is contained in the Resolution of the Government of India, Finance Department, No. 3773, dated 17th December 1873. The following passage shows the conclusion

arrived at: "Upon a consideration of all the opinions thus collected, it does not appear to the Governor-General in Council to be specially proved that hemp incites to crime more than other drugs or than spirits. And there is some evidence to show that on rare occasions this drug, usually so noxious, may be usefully taken. There can, however, be no doubt that its habitual use does tend to produce insanity. The total number of cases of insanity is small in proportion to the population, and not large even in proportion to the number of ganja smokers; but of the cases of insanity produced by the excessive use of drugs or spirits, by far the largest number must be attributed to the abuse of hemp. In Lower Bengal the circumstances have admitted of a system under which the consumption of ganja has been reduced one-half, while the amount of duty levied on it has been doubled. It would be very desirable to control the cultivation and preparation of ganja and bhang elsewhere in the same way. But it is believed that this would not be easy; indeed, it would probably be impracticable. Moreover, with the exception of the Chief Commissioners of British Burma and the Central Provinces, the Local Governments are not in favour of altering existing arrangements. His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices. As regards British Burma, the Chief Commissioner has already been informed that the Governor-General in Council concurs with him in thinking that the cultivation and consumption of ganja should be absolutely prohibited, and it has been prohibited from the beginning of the year 1873-74."

In 1877 the Bengal Government appointed a special officer, Babu Hem Chunder Kerr, to make a full inquiry into the details of the cultivation of ganja, the sufficiency or otherwise of the present safeguards, and the reforms which it might be advisable to introduce. Sir Ashley Eden's conclusions on this officer's report in regard to the effects of ganja and policy to be followed were as follows: "The Lieutenant-Governor has himself no doubt that the use of ganja in any form is injurious to the consumer, and that it is the duty of Government to make the tax on this article as high as it can possibly bear. Unfortunately it is habitually used by large numbers of the lower classes of the population, who would, if deprived of it altogether, apparently find in the leaves of the wild hemp plant and in other drugs narcotics and stimulants of equally deleterious character. It does not seem possible, therefore, to stop the cultivation altogether. The policy of Government must be to limit its production and sale by a high rate of duty without placing the drug entirely beyond the reach of those who will insist upon having it."

The last important utterance on the subject previous to the appointment of the Commission is contained in the letter of the Government of India, Finance Department, to Her Majesty's Secretary of State, No. 212, dated 9th August 1892, in which the following remarks occur: "We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India. But even if the absolute prohibition of the use of the drug could be enforced, the result might be to induce the use of still more noxious drugs. India abounds with plants growing wild from which drugs can be procured which are more deleterious in their effects than ganja. One such

plant is the dhatura (*Stramonium*), the seeds of which are already used to intensify the narcotic effects of bhang, a liquid preparation of hemp leaves; and we apprehend that if the use of ganja were suppressed altogether, dhatura might be largely resorted to by the poorer classes as a means of satisfying their craving for stimulants. Apart, however, from the objections just mentioned, we believe that it would be impossible to enforce in India a prohibition of the use of ganja. That drug is produced in Native States, and the difficulties in the way of preventing its import from them, if the supply in British India were cut off, would be immense. It would not, moreover, be possible to suppress the supply in British India. The hemp plant grows readily in India, in many places wild without cultivation of any kind, and it would be easy for any one addicted to the use of ganja to grow a plant or two in the enclosure of his own house and in nooks and corners which would be safe from observation and from the risk of detection. The question in the House of Commons suggests that as the possession and sale of ganja has been prohibited for many years in Burma, it is desirable that the same prohibition should be extended to other provinces of British India. The analogy of Burma does not, however, apply to India. When the prohibition was enforced in Burma, the drug was very little used by the Native Burmese, its consumption being almost entirely confined to coolies and other immigrants from India; and the cultivation of the plant in Burma, which had never been extensive, had virtually ceased, the consumers being dependent on importations for their supplies. In India, on the other hand, the practice of ganja smoking has existed from time immemorial, and among certain sects of Hindus, ascetics, and religious mendicants hemp intoxication is habitually indulged in; and, as explained in the preceding paragraph, it would be impossible to suppress the growth of the plant. But, although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognise it as our duty to restrict its consumption as far as practicable, and we have distinctly laid down the policy to be pursued in respect of this drug in our Resolution of the 17th December 1873 already quoted. The annual reports of Excise Administration show that the subject has since been continually before Local Governments, who are making every possible endeavour to minimise the evils and discourage the use of the drug wherever it is a source of danger to consumers."

Thus "restraining the use and improving the revenue by the imposition of suitable taxation," "discouraging the consumption by placing restrictions on the cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices," "limiting the production and sale by a high rate of duty without placing the drug entirely beyond the reach of those who will insist upon having it," "restricting consumption as far as practicable, minimising the evils, and discouraging the use of the drug wherever it is a source of danger to consumers" have from time to time been the watch-words of the Government in the matter of the hemp drugs, a policy only once definitely abandoned, *viz.*, in the case of Burma, where total prohibition was introduced in 1873.

Prohibition in other countries.

557. Allusion must be made to precedents for the prohibition of the hemp drugs in other countries in order to complete these general observations. Excepting British Burma (reference to which will be made further on), the Commission only know of four cases of pro-

hibition, *viz.*, in Turkey, Egypt, Greece, and Trinidad. For the first three of these, the only information at the disposal of the Commission is contained in the communications from Her Majesty's representatives addressed to the Secretary of State for Foreign Affairs in 1892 in consequence of a requisition made on them by the Earl of Rosebery at the request of Mr. W. S. Caine, M.P.

Turkey.

558. The ground of the prohibition in Turkey is thus stated in a note addressed by the Grand Vizir to the Ministry of Commerce, Constantinople, on 1st March 1292 (*sic*): "From the reports furnished by the Imperial Medical Council, it appeared that the use of hashish in the preparation of medicines was extremely rare, and that, being a narcotic, its use must of necessity be injurious, and that consequently the suppression of the cultivation of hashish could not fail to prove highly advantageous." The effect of the prohibition is thus described in an enclosure to the Ambassador's reply: "The importation and sale in Turkey of hashish, though contraband, is still, I hear, largely carried on, and is used for smoking, in the composition of various sweetmeats, and as an opiate in general."

Egypt

559. In Egypt the cultivation, use, and importation of hashish were first forbidden in 1868, but in 1874 it was allowed to be imported on payment of duty. In November 1877 an order was received from Constantinople that all hashish brought into Egypt was to be seized and destroyed, and finally, in March 1879, the importation and cultivation of hashish were prohibited by a Khedivial decree. In March 1884 it was provided that confiscated hashish should be sold by the Customs (for delivery abroad) instead of being destroyed as formerly, and the proceeds of the sale divided amongst the informers and officers who took part in the seizure. "This measure was rendered necessary," says Mr Caillard, the Director-General of the Customs, "by the absence of any fund from which rewards could be distributed; while, on the other hand, the profits of smuggling being very great, large sums were paid by the smugglers to insure the silence or complicity of the Customs officers, coastguards-men, and others. A considerable number of persons are employed in the smuggling trade, many of them having no other means of subsistence. Great ingenuity is displayed by the smugglers in this illicit trade, and no sooner has one trick been discovered than another is invented. The great obstacle, however, to the complete repression of the contraband trade is the refusal of some of the European Governments to recognize the right of the Egyptian Government to search suspected shops or warehouses, and to punish the delinquents by fine as well as confiscation. .... In view of the impossibility of suppressing the contraband trade in hashish under the circumstances described above, I suggested to the Minister of Finance the desirability of removing the prohibition against the importation of the drug, and I proposed to collect a customs duty of P T. 100 per kilogramme (9*s.* 3*d.* per lb.), besides a license-tax on the sale of the hashish. It has been abundantly proved that the vice of hashish smoking cannot be suppressed by legislation, whereas by a system of licenses it may be kept under control to some extent." Mr. Caillard estimates that the quantity of hashish consumed annually in Egypt cannot be less than 50,000 okes (about lbs. 140,000) notwithstanding the prohibition. He states that the hashish appears to be manufactured chiefly in Greece.

560. In Greece there is no law regulating or specially alluding to the production, manufacture, or export of hashish. The sale of it as merchandise is allowed, but a Police order of 1891 prohibits its sale and consumption in the small cafés of Athens and the Piræus, in some of which, during the previous ten or fifteen years apparently, the habit of using this drug had been gradually introduced. The order was based upon a report of the Sanitary Board at Athens, in which prominent mention is made of the observations made in India by English doctors, and the statistics of insanity in Bengal lunatic asylums ascribed to the use of the hemp drugs are put forward as justifying repressive measures. The effect of the order passed is not mentioned, sufficient time not having elapsed.

Greece

561. As regards Trinidad, the Commission are not sure that the hemp drugs are prohibited. The fact has been stated by the Indian Immigrants Commission, Natal, 1885-87,* and by Dr. Thomas Ireland, Government Medical Officer, British Guiana, in a paper published in the *Alienist and Neurologist*, St. Louis, in October 1893. But, on the other hand, Surgeon-Major Comins, lately on special duty in British and Foreign Colonies and the Netherlands, in his Note on Emigration from India to Trinidad, 1893, quotes a statement of the Protector of Immigrants, who says that in the year 1885 an Ordinance was passed requiring the payment of £100 per acre to obtain a license to grow ganja, which had previously been grown in large quantities. This practically put a stop to the growth and consumption for several years, but immigrants who had left Trinidad two years previous to the writing of his report had been growing it in Venezuela, and several seizures had been made by the Customs officers from persons endeavouring to introduce it into Trinidad. The Protector adds: "With a coast line such as ours, adjacent to that of the Spanish Main, it will be impossible to prevent its introduction into this colony if immigrants who go there continue to grow it." Dr. Comins himself says: "I do not know what are the laws in force here regarding the sale of opium and ganja."

Trinidad.

562. Thus in the case of other countries, where the use of the drugs has been prohibited, the Commission do not find in the literature available to them many arguments for prohibition. In Turkey it rests upon the theory accepted by orthodox Muhammadans that hashish "being a narcotic its use must of necessity be injurious," while in Egypt the prohibition emanated from Turkey. In both these countries the measure has by no means been attended with complete success. In Greece the prohibition in the cafés of Athens is based largely upon Indian experience, which the Commission have had cause in great measure to recast. In Trinidad, if there has been prohibition, it does not seem of late to have been effectual. It must be added that the Commission have no scientific information regarding the strength of the article of commerce called hashish, and it may differ to some extent from the Indian products. From the description of its manufacture given by the Mayor of Orchomenus in Mantinea in Arcadia, whence the Egyptian supply is mainly derived, it appears to resemble more the charas of Yarkand than the ganja or bhang of India.

Basis of prohibition and results in these countries.

563. Starting, therefore, from the position that what is known of the hemp drugs in the past is not sufficient to justify their prohibition in India, and that for such a measure there must be strong justification based on ascertained facts scientifically and

Is prohibition in India justifiable, feasible, and advisable?

* Report, Chapter II, paragraph 9.

systematically examined, the first question for the Commission to decide is whether such justification is to be found in the evidence before them, and the second whether, if this is so, prohibition is feasible and advisable on other grounds. These will now be considered.

Prohibition of bhang.

564 The effects of the hemp drugs have been treated in Chapters X to XIII of the Report; and as the first result of these conclusions, the Commission are prepared to state that the suppression of the use of bhang would be totally unjustifiable. It is established to their satisfaction that this use is very ancient, and that it has some religious sanction among a large body of Hindus; that it enters into their social customs; that it is almost without exception harmless in moderation, and perhaps in some cases beneficial; that the abuse of it is not so harmful as the abuse of alcohol; that its suppression, involving the extirpation of the wild hemp plant, would in some tracts be a matter of great difficulty; that such a measure would be extremely unpopular, and would give rise to widespread discontent; and, finally, that, if successfully accomplished, it would lead to the use of more hurtful stimulants. The Commission deem it unnecessary to traverse the evidence further than has been done in the preceding chapters of this report in support of these propositions. It is almost unanimous in regard to them. The utmost that is necessary in regard to this product is that it should be brought under more effective control, and this matter will be dealt with further on. But absolute prohibition is, in the opinion of the Commission, entirely out of the question.

Prohibition of ganja and charas.

565. Though it has been shown that as a rule ganja and charas are used in moderation, and that the moderate use ordinarily does not cause appreciable injury, yet it has been established that the excessive use of these forms of hemp drugs has been more injurious than in the case of bhang. Whether they should be prohibited or merely controlled is a question which might be settled merely with reference to their ascertained effects. The Commission consider that the effects are not such as to call for prohibition, and on the general principles discussed in the opening paragraphs of this chapter, such interference would be unjustifiable. Nevertheless, it seems advisable to refer to the other evidence with a view to ascertaining the generally prevailing views on the subject, and considering the grounds on which prohibition is advocated or opposed.

The evidence regarding prohibition of ganja and charas may be considered together.

566. In reviewing the evidence on these points, it will not be necessary to draw a distinction between ganja and charas. The effects of these two drugs have been shown to be similar, though charas is *cæteris paribus* the more potent. They are both ordinarily smoked, though very occasionally used for eating and drinking usually in the form of admixtures with other condiments. As stated by Mr. Lyall (Bengal 1): "Ganja and charas are really one, and in time, if the question be scientifically followed up, possibly charas will be the only form used." The refuse of ganja is used in some provinces as bhang, but this substance more nearly resembles bhang than ganja properly so called. The ganja of the different provinces varies in quality. But these distinctions cannot here be specially observed; it will be sufficient to bear in mind that the opinions in Bengal, the Central Provinces, Madras, Bombay, and the smaller Administrations relate to ganja; that those in the Punjab relate to charas; and that those in the

North-Western Provinces and Sind relate to ganja and charas, both of which are consumed.

Supply of ganja and charas in its relation to prohibition.

567. A few remarks, however, recapitulating the local conditions of ganja and charas will not be out of place. Charas is practically a foreign article. Small amounts are imported from Nepal and Gwalior, but they may be left out of the account. The bulk comes from Yarkand through the Himalayan passes, or to a much smaller degree from other parts of Central Asia through the routes on the frontier of Afghanistan. It would not be a very difficult matter to stop these imports, though the co-operation of the Kashmir Darbar would be necessary in regard to Yarkand charas. It may, therefore, be accepted that the supply of charas might be cut off without much difficulty, though, as this article forms the principal import from Yarkand, the prohibition of charas would paralyse, if not extinguish, the trade with this country. In regard to ganja, the problem is more complex. Ganja is regularly cultivated in Bengal, the Central Provinces, Madras, Bombay, and Berar. In Bengal and the Central Provinces, the cultivation of the hemp plant for its production is under complete control. In Berar cultivation is only permitted under license. In the other tracts of British territory it is not directly controlled. Assuming that control is possible in these tracts, it does not follow that it would be equally possible to prevent cultivation altogether. Moreover, there still remains a considerable amount of production in many of the Native States all over India. To induce these States to prohibit cultivation would be a difficult matter, and, even if this were done, the suppression of illicit cultivation would offer the most serious difficulties. For, though ganja of good quality requires some cultivation and tending, the evidence before the Commission tends to establish the fact that ganja of an inferior kind can be manufactured from the spontaneous or casual growth which is found near human habitations and amidst cultivation of other crops in many parts of India. While, therefore, it cannot be asserted that the task of preventing the manufacture of ganja is an impossible one, it would certainly at the present time be attended with considerable difficulty.

Opinions of the witnesses regarding prohibition of ganja and charas

568. The question addressed to the witnesses regarding the prohibition of the hemp drugs (No. 35) was so framed as to elicit in the first place opinions as to the feasibility of such a measure. The considerations bearing upon the subject were also set forth in the form of subsidiary questions. The question whether the witnesses advocated prohibition was not specifically put, but it is not difficult, comparing the answers to the questions above mentioned with those relating to other questions, to decide what the opinion of each witness is on this question. Those who hold decided views have no doubt generally stated them in some portion of their answers, and at all events ample opportunity of doing so was afforded them. A larger number of the witnesses have contented themselves with merely giving an affirmative or negative answer to the questions on the subject. It is impossible to attach much importance to such answers. The Commission have abstracted them and considered them, but they feel bound to give far more weight to the opinions of witnesses whose replies show that they have formulated an opinion on the desirability of prohibition. Some account will now be given of these answers.

Opinions regarding prohibition of ganja and charas.

569. Out of the total of 1,193 witnesses, 575 have expressed a decided opinion on the question of prohibition. Of these only 99 advocate it in their answers. The remainder are against it. The classification of these witnesses is shown in the following table :—

Province.	Superior Civil Officers.		Superior Medical Officers.		Subordinate Civil Officers.		Subordinate Medical Officers and Medical Practitioners.		Non-officials.		Total.	
	For.	Against.	For.	Against.	For.	Against.	For.	Against.	For.	Against.	For.	Against.
Bengal	...	29	...	9	1	36	4	8	9	62	14	144
Assam	...	4	1	1	...	1	...	1	4	8	5	15
North-Western Provinces...	...	13	...	1	6	29	9	10	18	26	33	79
Punjab	3	10	...	1	3	8	2	3	10	14	18	36
Central Provinces ...	...	9	1	2	1	18	1	1	...	24	3	54
Madras	...	21	1	5	1	12	1	11	8	18	11	67
Bombay and Sind ...	...	19	1	1	3	26	4	7	1	16	9	69
Berar, Ajmere, Coorg, and Quetta-Pishin.	...	1	...	...	1	8	3	1	2	2	6	12
Total	3	106	4	20	16	138	24	42	52	170	99	476
Per cent. ...	3	97	17	83	10	90	36	64	24	76	17	83

Thus, not only is there a very large preponderance of opinion against prohibition, but the preponderance is specially marked among superior Civil officers. The only witnesses indeed of the latter class who favour prohibition are three in the Punjab, where charas and not ganja is consumed.

The most important of these opinions on either side will now be specified. The most forcible opinions in favour of prohibition will be quoted at some length in order that the argument for this view may be thoroughly appreciated. The opinions against prohibition are too numerous to be quoted, but the witnesses will be named under headings setting forth the most prominent views expressed.

Bengal opinions in favour of prohibition of ganja.

570. The Bengal witnesses in favour of prohibition of ganja consist of a Sub-Deputy Collector, an Assistant Surgeon, two Medical Practitioners, an Honorary Magistrate, two zamindars, two pleaders, a delegate from the Indian Relief Society, Calcutta, the Secretary to the Band of Hope, Faridpur, the Secretary to the Bogra Medical Society, and two Missionaries. The Commission cannot find much to quote from these opinions, but the following are the most forcible :—

(238) Delegate, Indian Relief Society, Calcutta, Babu Amrita Krishna Mullick, B.A., B.L.: After quoting official and medical opinions relating to the injuriousness of ganja, the Society endeavours to show that the cultivators of the hemp plant lose largely by their occupation, and maintains that it is the duty of the Government to come to their rescue by abolishing it. The Society maintains

that the privation to the consumers would not be serious, and that it is difficult to suggest any drug more deleterious than ganja to which they could take. The Society contends that the alleged religious sanction to the use of the drugs is a fallacy, and refers to the opinions of several pandits in support of this view. The Society argues that to meet the deficit in the revenue, which would be about 24 lakhs per annum, the salaries of European officers should be cut down, the duties on cotton goods re-imposed, and the income-tax increased with an enhanced taxable minimum. Savings would be effected by reduction of establishment and by decreased cost of lunatic asylums.

(236) Secretary, Band of Hope Temperance Society, Faridpur, Babu Purna Chandra Maitra: "This Society begs to urge upon the Commission to consider the justice and propriety of a just, benign, and Christian Government to allow cultivation and sale of a drug which has been excluded from some countries, and in England doubly protected in the poison list." The witness argues that the drug "has been unreservedly condemned by eminent doctors as one of the most dangerous poisons known, as the most potent cause of lunacy, and as the most pernicious and deleterious of all excitants ever in use in any country." He admits that there are a number of jogis, sanyasis, fakirs, and mendicants addicted to ganja smoking, but states that ganja smoking forms no part of their religion, and there is not a single Hindu or Muhammadan religious book which sanctions the use of ganja. "No real disaffection can under the benign rule of the British Government be seriously apprehended, and, even in the event of there being such apprehension, the fact should not be lost sight of that the Government in this case will have the support of the bulk of the population." He alleges that ganja produces crime, and that the taxation, amounting to 22 lakhs, is a drain on the poverty-stricken and half-famished people of Bengal. He finds it difficult to suggest a substitute for ganja, but liquor may be one, and a peculiar preparation of strong tobacco may also serve the purpose.

(134) Secretary to Bogra Medical Society (10 members), Pyari Sanker Dass Gupta, L. M. S.: "The prohibition will give rise to no political danger. For the ganja smokers have very little influence over society. The Government has faced questions of a greater religious character, as the Suttee or the Age of Consent Act, with boldness. This is comparatively a minor question affecting only depraved men."

(203) Rev. W. B. Phillips, Missionary.: "What with liquor and opium and hemp drugs of various kinds, all licensed by Government, it does seem as if the population were terribly exposed to degrading influences. It is not my province to face the difficult task of dealing with these evils; and I sincerely sympathize with the Government in the heavy duty of solving the grave problems involved. But I do feel it my duty to set forth as strongly as possible the assurance that very much mischief is being worked in the country by the various intoxicants so freely and largely sold. I hardly care to distinguish between opium, alcohol, and ganja. I regard them all as bad. My mind is so impressed with the evil effects of excessive use that I do not care to consider the moderate use. I would wish Government to begin with ganja, to proceed with little delay against opium, and then tackle alcohol. I prefer this as a matter of policy, as ganja is easiest dealt with. I am prepared to prohibit all three intoxicants on account of the evil which I see done by them."

(81) Kali Das Mukerji, Sub-Deputy Collector: After advocating prohibition of ganja on the grounds of the evil effects, and stating that there would be no danger from the discontent caused owing to the small number of the consumers, the witness proceeds: "The reasons usually put forward in favour of ganja consumption are as follows: (1) that Hindu friars and jogis cannot do without it, for it helps them in their religious contemplation, and sustains them under severe exertion and exposure; (2) that it is a safeguard against disease in malarious tracts; and (3) that it serves the labouring classes as a refreshing stimulant, alleviating fatigue. I do not think that any of these reasons is conclusive, though plausible. In fact, none of them stands the test of close examination. If any intoxicating drug is at all necessary for friars and jogis, alcohol, opium, or siddhi may serve the purpose. Eight kinds of intoxicating drugs are prescribed in the Tantras for Hindu devotees, and it is optional with them to take any if they care to do so at all.................. That ganja is a safeguard against disease in malarious tracts is not necessarily true.................. Even as a stimulant and remover of fatigue, ganja has very little to recommend it to the labouring classes.................. A careful observation is sure to establish the fact that any ordinary labourer whose only stimulant is tobacco is on the whole a better workman than his ganja consuming brother."

571. It is impossible to quote the mass of opinion against prohibition of ganja, but the following analysis of some of the most important opinions will give an idea of the strength of these opinions:—

Opinions against prohibition of ganja in Bengal.

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue.

(2) Mr. Westmacott, Commissioner.

(9) Mr. Price, Collector.

(11) Mr. Skrine, Collector.

(21) Mr. Jenkins, Collector.

(17) Mr. Gupta, Commissioner of Excise.

(46) Ganendra Nath Pal, Deputy Collector.

(197) Mr. H. M. Weatherall, Manager, Nawab's Estates, Tippera.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue.

(2) Mr. Westmacott, Commissioner.

(19) Mr. Manisty, Collector.

(18) Mr. Hare, Collector.

(16) Mr. Marindin, Collector.

(32) Mr. Bedford, Deputy Commissioner.

(63) Abhilas Chandra Mukharji, Deputy Collector.

(62) Kanti Bhushan Sen, Deputy Collector of Excise.

(163) Maharaja Bahadur Sir Jotendra Mohan Tagore, K.C.S.I.

(174) Radhika Churn Sen, Zamindar.

(175) Raghonandan Parsad, Zamindar.

(185) Jogendra Krishna Rai Chaudhri.

(207) Purnendu Narayan Sinha

(208) Mahendra Chandra Mitra, Chairman, Naihati Municipality.

(92) Mr. Ricketts, Manager, Nilgiri State.

(217) Biprodas Banarji, Pleader, Newspaper Editor, and Chairman, Baraset Municipality

(250) District Board, Monghyr.

(228) Jadubans Sahai, Vice-Chairman, Arrah Municipality.

(3) *Prohibition might lead to the use of dhatura or other intoxicants worse than ganja.*

(21) Mr. Jenkins, Collector.

(46) Ganendra Nath Pal, Deputy Collector.

(62) Kanti Bhushan Sen, Deputy Collector of Excise.

(161) Maharaja Girijnath, Roy Bahadur.

(164) Raja Surja Kanta Acharjya, Bahadur.

(167) Radha Balav Chaudhri, Rai Bahadur.

(233) Secretary, Rajshahi Association.

(217) Biprodas Banarji, Pleader, &c.

Assam.

Opinions in favour of prohibition of ganja.

572. The opinions in favour of prohibition of ganja in Assam are those of a Civil Surgeon, the Secretary to the Tezpur Raiyats Association, the Secretary to the Upper Assam Association, a merchant, and a pensioned Overseer, Public Works Department, and member of a Local Board. There is nothing especially to note in these opinions.

Opinion against.

573. Against prohibition we have the Commissioner of the Assam Valley, the Commissioner of Excise, the Director of Land Records and Agriculture, an Officiating Deputy Commissioner, a Civil Surgeon, an Extra Assistant Commissioner, a medical practitioner, four pleaders, and four planters.

Mr. Driberg, Commissioner of Excise, says: "It would be useless to prohibit the use of ganja in a province like Assam, surrounded as it is by independent hill people, who would cultivate it in their hills and smuggle it down with little risk of detection. Any prohibition will only lead to the increase of illicit consumption and to the secret use of the drug, which would be decidedly bad; of course, stop cultivation in Bengal, and the prohibition of the use of excise ganja could be enforced; but there would be serious discontent, though in this province

it might not amount to a political danger, and the prohibition would be followed by recourse to opium, and in some cases to alcohol." The evidence of planters tends generally to show that the use of ganja by the garden coolies, who (except in the western districts of the Assam Valley and those of the Surma Valley, all of which border on Bengal) are the principal consumers, produces no serious effects. There is nothing in any of the Assam evidence to controvert these views.

North-Western Provinces.

Opinions in favour of prohibition of ganja and charas.

574. The advocates of prohibition of ganja and charas in the North-Western Provinces are as follows: 6 subordinate civil officers, 9 subordinate medical officers and private medical practitioners, and 18 non-officials. But few of these witnesses give any reasons for their opinions. And the Commission are not able to quote any one of them as having any special weight. The only opinion which it appears worth while to quote is that of a Collector (Mr. Addis (4), who does not, however, specifically recommend prohibition. He says: "It probably would be feasible to prohibit the use of all these drugs. Public opinion is against their use, and the people are very obedient to authority. The prohibition would certainly lead to the increased use of opium and alcohol."

Opinions against prohibition.

575. On the other hand, the opinions against prohibition are very strong. The following is an analysis of some of the most important:—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Hon'ble A. Cadell, Member, Board of Revenue.

(6) Mr. Stoker, Commissioner of Excise.

(12) Mr. Brownrigg, Officiating Deputy Commissioner.

(20) Mr. Partridge, Officiating Deputy Commissioner.

(9) Mr. Jackson, Collector.

(10) Mr. Tweedy, Collector.

(17) Mr. Spencer, Officiating Collector.

(34) Mr. Cockburn, Assistant Sub-Deputy Opium Agent.

(32) Mr. Robarts, Joint Magistrate.

(26) Rama Shankar, Assistant Collector.

(24) Mr. Rogers, Assistant Commissioner.

(191) Kanwar Kundan Singh, Zamindar.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(12) Mr. Brownrigg, Officiating Deputy Commissioner.

(9) Mr. Jackson, Collector.

(10) Mr. Tweedy, Collector.

(34) Mr. Cockburn, Assistant Sub-Deputy Opium Agent.

(21) Mr. Gillan, Assistant Collector.

(26) Rama Shankar, Assistant Collector.

(46) Pandit Bishambar Nath, Deputy Collector.

(28) Mr. Bruce, Assistant Collector.

(33) Pandit Sri Lall, Officiating Joint Magistrate.

(185) Kewal Ram, Zamindar.

(220) Mr. Finch, Planter.

(190) Bas Deo Sahai, Zamindar.

(227) Syad Mahammad Nuh, Zamindar.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja or charas.

(6) Mr. Stoker, Commissioner of Excise.

(15) Mr. Ferard, Collector.

(28) Mr. Bruce, Assistant Collector.

(51) Thakur Tukman Singh, Deputy Collector.

Punjab.

Opinions for prohibition of charas.

576. The advocates of the prohibition of charas in the Punjab are as follows:—3 superior civil officers, 3 subordinate civil officers, 2 subordinate medical officers, and 10 non-officials.

It may be noted that *Mr. Ogilvie, Financial Commissioner in charge of Excise (2)*, records the following opinion: "I am inclined to hold the opinion, though I am not quite satisfied on the subject, that the use of charas is so deleterious that it might be permissible, both on grounds of morality and utility, for its use to be prohibited or for the price of the drug to be so artificially raised as to confine its consumption to a very small number indeed. The reason why I say that I am not quite satisfied on the point is because I have not sufficiently investigated the facts. All that I can, therefore, say with certainty is that my opinion tends to the direction above indicated............ I would observe, however, with regard to the Yarkand trade that the imposition of a duty so high as to be practically prohibitive would very considerably injure that trade, because the Yarkand trader in exchange for the charas takes back the products of the Punjab to his own country or to Kashmir. The extinction or serious injury of the Yarkand trade would, of course, be a very regrettable circumstance. On the other hand, from my personal knowledge as Deputy Commissioner of the Dera Ismail Khan District, I would say no harm would accrue to general trade on the western border from the prohibition of charas."

Mr. Coldstream, Deputy Commissioner (5), though he does not seem to have formed a definite opinion regarding the moderate use of the drugs, says: "The *gradual* stoppage of import of ganja and charas might be tried. It is not as yet a very widely-spread habit, but it might grow. It would cause great pain and discontent if the prohibition were sudden and comprehensive, but this would not amount to political danger. A prohibitory measure regarding ganja and charas would no doubt be followed at once by a recourse to opium and alcohol.

I can quite believe the moderate occasional use of the drugs may be comparatively harmless, but I am not aware that they are commonly used occasionally and in moderation. They may, however, be so used for all I know."

Mr. Wilson, Deputy Commissioner (14), says that he should like to see the experiment made in selected districts of prohibiting trade in charas (and bhang) altogether. As regards charas, he thinks the prohibition would be feasible, as it is imported, and the discontent would be insignificant. He knows of no class, such as labourers, who take the drug in moderation as an ordinary stimulant. Among fakirs and other excessive consumers, he thinks the use produces great evils, and that there is no more harmful drug which they are likely to take to. He does not know anything of the use of dhatura except its administration as a poison. He thinks sudden prohibition would be cruel. He would therefore begin by taxation and gradually raise it, leaving the question of total prohibition to be decided by experience.

The evidence of *Arjan Singh, Extra Assistant Commissioner (19)*, is much to the same effect, but he states that the use of dhatura is general among the followers of Siva at the Shivratri in the Dera Ghazi Khan district. He says it is taken in very small quantities, so that its effect is almost imperceptible.

General Millet (69), formerly District Superintendent of Police, would like to see all intoxicants prohibited which cannot be proved to be actually necessary. He thinks gradual prohibition of the hemp drugs feasible, and that educated, intelligent native public opinion, which to a great extent leads that of the lower classes, would support prohibition. Discontent at first among the degraded classes would be inevitable, but there would be no political danger, though tact and discretion would be needed and calm-minded European officials at the helm. He fears that recourse to alcohol would be the result.

Shekh Riaz Husain, zamindar (67), thinks that "having regard for the welfare and good of the people which the British Government has in view, the prohibition of the hemp drugs (including bhang) is imperatively necessary. Loyal and intelligent subjects and well-wishers of the country would welcome the prohibition, though the unscrupulous habitual consumers would indeed dislike it. But as it would be for the good of the people, it is not hoped that any class of persons would resent it. The enforcement of the prohibition should be effected like other new laws and regulations, exceptions being made to some extent in the case of the existing old habitual consumers, because its sudden stoppage would cause them serious privation. The discontent resulting would not amount to a political danger. If it were possible to make charas as expensive as alcohol, that would be one way of dealing with the subject."

Sardar Sujan Singh, Rai Bahadur, Contractor (59), considers charas as certainly most injurious, and thinks its use should most certainly be prohibited. It does no good to anybody. There are not many *kahars* who take it. Those who do, go to the bad. He does not know of the use of dhatura as an intoxicant. The use of madak and chandu is more injurious than charas, and they also should be prohibited as well as liquor. He would not recommend immediate prohibition, but would put on such a tax, increasing it gradually, as to make it impossible for the majority of people to buy them at all.

Dr. H. M. Clark, Missionary (46), would like to see charas prohibited if it were possible. He thinks, however, that alcohol does more harm than charas. He cannot believe that a moderate use of charas is possible. Fakirs and devotees are the chief consumers.

Devi Dayal, Editor of the Kaistha Mitra, Lahore*, circulation 300 copies (83), says: "If charas be called poison (fatal, killing, murdering drug), it is not an exaggeration of any kind. It is a great vice to smoke charas. May God not give this even in the lot of a foe. Only just people as have bad luck get engaged in this vice. Government will do their subjects a very great obligation by saving them from early death and whirlpool of destruction and ruin. My present belief is that there is no such thing as moderation in the use of charas, because, when a *charsi* visits another, he offers him the *chillum*, and they smoke in company. The smoke is thus repeated frequently." Consumers acknowledge that they would have no complaint; and if Government were to prohibit the use of charas to-morrow, the bad habit would die out of itself.

Ganesh Das, Pleader, and President, Sarin Sabha, Hoshiarpur (77): Charas is consumed by shoemakers, musicians, jogis, sanyasis, and suthra fakirs, and by some Khatris and Brahmins. The physical effects are very bad, and most consumers become incapacitated for work and lead a miserable life. The sub-committee of the Sarin Sabha appointed to consider the subject recommend prohibition. Enquiry was not made from medical experts. Consumers would not take to other intoxicants, because the intoxication of charas is not like that of opium or other intoxicants. The greatest loss would be that of the traders of Hoshiarpur and Amritsar, who take merchandise to Ladakh and Yarkand and bring back charas.

Opinions against prohibition of charas.

577. The following is an analysis of some of the most important evidence against prohibition :—

(*1*) *Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.*

(1) Mr. Rivaz, First Financial Commissioner.
(3) Mr. Thorburn, Commissioner.
(6) Mr. Ibbetson, Deputy Commissioner.
(8) Mr. Maconachie, Deputy Commissioner.
(13) Mr. Drummond, Deputy Commissioner.
(66) Kazi Syad Ahmad, retired Government servant.

(*2*) *Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.*

(3) Mr. Thorburn, Commissioner.
(6) Mr. Ibbetson, Deputy Commissioner.
(10) Mr. A. Anderson, Deputy Commissioner.
(8) Mr. Maconachie, Deputy Commissioner.
(13) Mr. Drummond, Deputy Commissioner.
(29) Mr. Brown, Officiating Deputy Inspector-General of Police.

* This paper has ceased to exist.

(39) Thakur Das, Rai Bahadur, Assistant Surgeon.

(36) Bhagwan Dass, Assistant Surgeon.

(25) Muhammad Ikramulla Khan, Khan Bahadur, Honorary Extra Assistant Commissioner.

(27) Muhammad Barkat Ali Khan, Khan Bahadur, retired Extra Assistant Commissioner.

(61) Bahram Khan, Honorary Magistrate.

(93) Gujar Mal, Trader.

(94) Jawala Bhagat, Trader.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than charas.

(76) Babu P. C. Chatterji, Judge, Chief Court.

(10) Mr. A. Anderson, Deputy Commissioner.

(18) Rai Bahadur Bhagwan Dass, Extra Assistant Commissioner.

(39) Thakur Das, Rai Bahadur, Assistant Surgeon.

(27) Muhammad Barkat Ali Khan, Khan Bahadur, retired Extra Assistant Commissioner.

(86) Lachman Dass, Merchant.

Central Provinces.

Opinions in favour of the prohibition of ganja.

578. There are only two witnesses in the Central Provinces who advocate the prohibition of ganja. Honorary Surgeon-Major Harrison (38), on the retired list, employed in the Kalahandi State, advocates gradual prohibition, "which would cause discontent, but not any serious danger. The prohibition would no doubt be followed by recourse to alcohol and other stimulants." The other is a pensioned hospital assistant, who also advocates gradual prohibition.

Opinions against prohibition of ganja.

579. The following is an analysis of some of the most important evidence against prohibition :—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Mr. Neill, Judicial Commissioner.

(4) Mr. Laurie, Officiating Secretary to Chief Commissioner.

(2) Colonel Bowie, Commissioner

(9) Mr. Drake-Brockman, Officiating Excise Commissioner.

(39) Dr. Prentice, Civil Surgeon.

(66) Rev. Israel Jacob, Missionary.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(1) Mr. Neill, Judicial Commissioner.

(4) Mr. Laurie, Officiating Secretary to Chief Commissioner.

(2) Colonel Bowie, Commissioner.

(3) Mr. Anderson, Officiating Commissioner.

(6) Mr. Duff, Deputy Commissioner.

(27) Mr. Lowrie, Officiating Deputy Conservator of Forests.

(17) Batuk Bharthy, Superintendent, Kalahandi State.
(66) Rev. Israel Jacob, Missionary.
(68) Rev. Oscar Lohr, Missionary.
(22) Vinayak Balkrishna Khare, Excise Daroga
(59) Lall Noorpraj Singh, Zamindar.
(47) Mir Imdad Ali, Honorary Magistrate.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja.

(1) Mr. Neill, Judicial Commissioner.
(9) Mr. Drake-Brockman, Officiating Excise Commissioner.
(39) Dr. Prentie, Civil Surgeon.
(64) Rao Sahib Balwantrao Govindrao Bhuskute, Jagirdar.

Madras.

Opinions in favour of the prohibition of ganja.

580. The Madras witnesses in favour of prohibition are a Civil Surgeon, a subordinate civil officer, a medical practitioner, a Hindu priest, and six missionaries.

Dr. King (85) says: "The restriction of the sale of ganja under conditions similar to those required for poisonous drugs in Great Britain would be an unqualified blessing to the country, thus contrasting with the action taken against opium, which agitation I believe to be unnecessary and mischievous. I consider special measures should be taken to restrain the use of ganja by sepoys, and especially to prevent the young sepoy from acquiring the habit." In oral examination, however, Dr. King stated as follows: "My opinion of the effect of the moderate use in impairing the moral sense and inducing laziness, etc., is a general impression and not based on actual observation. My impression is based on the fact that persons alleged to have been ganja smokers have presented these characteristics. They were pointed out as notorious ganja smokers. I did not discriminate in these cases between the moderate and excessive use."

Syad Mahmud (122) says: "It is an unquestionable fact that ganja, bhang, and charas are poisons, and this fact is admitted by all. In my opinion their suppression would be an act of virtue deserving of future reward, but it is not advisable to suppress their use at once. Its suppression should be regulated under certain rules without any loss to the State. To the best of my knowledge and researches, alcohol cannot be safely used as a substitute for ganja, charas, and bhang."

Rev. Mr. Laflamme (153), speaking on behalf of the Baptist Missionary Conferences of the Presidency, advocates prohibition in these terms: "Owing to the scarcity of shops in these parts, practical prohibition exists. Much that is consumed is consumed illicitly. The introduction of the license system seems to have had no appreciable effect on the use of the drugs. The ganja is nearly all grown by the consumers in their own yards." "The drugs should all be so safeguarded as to prevent or minimize any possible harm resulting from their abuse." "The general sense of the people is opposed to the use of the drugs." So far as the witness can gather, the members of the Mission are united in the belief that in these parts hemp drugs are far less injurious than opium and alcohol;

thus far that the latter are not only much more extensively used, but much more baleful in their effects. Two other missionaries, though neutral in opinion, are worth quoting. *Rev. Mr. Pittendrigh, Missionary (160)*, says that he would have ultimate prohibition in view if possible, but there is not much ground for special interference in anything that he has seen. Another Missionary, the *Rev. Mr. Goffin (145)*, cannot undertake to criticise the present or any system of excise administration. His impression is that Government would be wise to adopt a strictly "let-alone" policy, leaving it to the spread of education and enlightenment among the people to prevent and lessen all its effects. The province of Government should be carefully to watch such effects, and wherever and whenever necessary interfere with prohibitive legislation. Such necessity, however, in his opinion would not often occur.

Opinions against prohibition.

581. Among those who are opposed to prohibition, the evidence of the following witnesses may be quoted:—

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

(1) Hon'ble C. S. Crole, Member, Board of Revenue.
(8) Mr. Willock, Collector.
(14) Mr. Bradley, Collector.
(19) Raja K. C. Manavedan, Collector.
(23) Mr. Campbell, Sub-Collector.
(30) Mr. Levy, Acting Deputy Collector, Salt and Abkari.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

(8) Mr. Willock, Collector.
(10) Mr. Stokes, Collector.
(6) Mr. Sewell, Collector.
(30) Mr. Levy, Acting Deputy Collector, Salt and Abkari.
(94) Dr. Walker, Civil Surgeon.
(95) Dr. Sarkies, Civil Surgeon.
(38) Buddhavarapu Narayana Murthi Pantalugaru, Assistant Collector.
(23) Mr. Campbell, Sub-Collector.
(121) H. S. A. M. Manju Miyyah Sahib, Medical Practitioner.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja.

(23) Mr. Campbell, Sub-Collector.

Bombay.
Opinions in favour of prohibition of ganja.

582. For the prohibition of ganja or charas in Bombay and Sind, we have the following advocates: in Bombay two mamlatdars, a hospital assistant, and a medical practitioner; and in Sind a health officer, two hospital assistants, and a banker. There is not much that need be quoted from the evidence of these witnesses. It may be noted that the Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc., (1), holds that the policy of Government in

relation to the hemp drugs should be one of restriction, as far as restriction is possible, and that, if absolute prohibition were possible, he thinks it would be a good thing. Owing, however, to the fact that the territories of the Bombay Presidency interlace so extensively with foreign territory, and to the feeling which would be aroused among the consumers and those who sympathize with them, it would in his opinion be impossible or undesirable. The Secretary to the Arya Samaj in Bombay (109) states that while, fully sympathising with the objects of the Commission, which are apparently understood to be the restriction or prohibition of the drugs, the Arya Samaj "is of opinion that any Governmental action in the direction of further restricting the preparation and sale of the drug will be productive of very little good. The Samaj believes that education of the masses is the only proper and effective remedy for correcting such baneful habits, and fears that any compulsion in this matter is likely to drive the consumers of these comparatively innocuous drugs to the use of more injurious intoxicants that are plentifully supplied to the people like the various preparations containing alcohol." The Samaj prays that the Government will devise measures for the restriction of the sale of European liquor in India, and leave the hemp drugs to themselves. The only thorough advocate of prohibition whose opinion is worth specifying is Rao Sahib Shesho Krisna Madkavi (41), who considers such prohibition very necessary, and holds that, although there would be temporary discontent among the consumers, such discontent would not amount to a political danger, "the people in this part of the country being loyal and of mild nature, and the proportion of the persons using bhang and ganja to the general population being too small to be taken into consideration."

583. On the other hand, the opinions against prohibition are weighty. The following may be specially quoted :—

Opinions against prohibition.

(1) Prohibition impossible or unnecessary, or could not be enforced without a large preventive establishment.

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.

(3) Mr. Vidal, Chief Secretary to Government.

(10) Mr Monteath, Collector.

(12) Mr. Cumine, Acting Collector.

(53) Mr. Vincent, C.I.E., Officiating Commissioner of Police.

(110) Rai Bahadur Vishvanath Keshava Joglekar, Merchant.

(108) Daji Abaji Khare, Honorary Secretary, East Indian Association.

Sind.

(1) Mr. James, Commissioner in Sind.

(26) Seth Vishindas Nihalchand, Zamindar and Merchant.

(2) Prohibition would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger.

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.

(2) Mr. Reid, Commissioner.

(10) Mr. Monteath, Collector.
(8) Mr. Lely, Collector.
(59) Mr. Foard, Superintendent of Police.
(57) Mr. Austin, District Superintendent of Police.
(54) Mr. Kennedy, District Superintendent of Police.
(26) Khan Bahadur Dadabhai Dinshaji, Deputy Collector.
(38) Mr. Almon, Assistant Collector of Abkari.
(49) Yashvantrao Nilkanth, Superintendent, Office of Survey Commissioner.
(104) Desaibhai Kalidas, Pleader.
(46) Balkrishna Narayan Vaidija, State Karbhari.
(39) Rai Sahib Ganesh Pandurang Thakur, Mamlatdar.
(110) Rai Bahadur Vishvanath Keshava Joglekar, Merchant.
(100) Parbhuram Jeewanram, Vaidya.
(115) Nanu Mian B. Shekh, Municipal Secretary, Surat.

Sind.

(1) Mr. James, Commissioner in Sind.
(4) Khan Bahadur Kadirdad Khan, Gul Khan, C.I.E., Deputy Collector.
(5) S. Sadik Ali, Deputy Collector.
(26) Seth Vishindas Nihalchand, Zamindar and Merchant.

(3) Prohibition might lead to use of dhatura or other intoxicants worse than ganja.

Bombay.

(1) Hon'ble T. D. Mackenzie, Commissioner of Abkari, etc.
(6) Mr. Sinclair, Collector.
(53) Mr. Vincent, C.I.E., Officiating Commissioner of Police.
(49) Yashvantrao Nilkanth, Superintendent, Office of Survey Commissioner.
(62) Rao Sahib Pranshankar, Inspector of Police.
(102) Ramchandra Krishna Kothavale, Inamdar.
(109) Secretary, Arya Samaj, Bombay.

Berar, etc.

584. From the minor administrations in Berar, Ajmere, Coorg, and Quetta-Peshin, there are no opinions requiring special notice. The statistical detail has been given in the table in paragraph 569.

General conclusions in regard to total prohibition of ganja, charas, and bhang.

585. A general review of the evidence relating to the question of prohibition of ganja and charas brings the Commission to the same conclusion as that which they have framed upon a consideration of the evidence on the ascertained effects alone. The weight of the evidence above abstracted is almost entirely against prohibition. Not only is such a measure unnecessary with reference to the effects, but it is abundantly proved that it is considered unnecessary or impossible by those most competent to form an opinion on general grounds of experience; that it would be strongly resented by religious mendicants, or would be regarded as an interference with religion, or would be likely to become a political danger; and that it might lead to the use of dhatura or other intoxicants worse than

ganja. Apart from all this, there is another consideration which has been urged in some quarters with a manifestation of strong feeling, and to which the Commission are disposed to attach some importance, *viz.*, that to repress the hemp drugs in India and to leave alcohol alone would be misunderstood by a large number of persons who believe, and apparently not without reason, that more harm is done in this country by the latter than by the former. The conclusion of the Commission regarding bhang has been given in paragraph 564; under all the circumstances they now unhesitatingly give their verdict against such a violent measure as total prohibition in respect of any of the hemp drugs.

Policy in regard to hemp drugs.

586. Failing prohibition, the question arises, what should be the policy of the Government in regard to the hemp drugs? On this point some important evidence has been recorded, and the Commission deem it to be within the scope of their duty to state in general terms their own conclusions. In the first place, then, they are of opinion that in view of the harmful effects produced by the excessive use, and in exceptional cases even by the moderate use, of the drugs, the action of the Government should be directed towards restraining the former and avoiding all encouragement to the latter. The object should be to prevent the consumers, as far as may be possible, from doing harm to themselves and to lessen the inducements to the formation of the habit which might lead to such harm. In aiming at this object, however, other considerations need to be kept in view. There is in the first place the question of illicit consumption. If the restriction imposed by Government is counterbalanced by a corresponding increase in smuggling, no advantage is gained, but, on the contrary, a moral wrong is done to the community apart from the annoyance necessitated by such restrictions. Then, if there is a legitimate use of the drugs, restrictions should not be such as to make the exercise of this use impossible. The Commission have formed the opinion that there is a legitimate use of the hemp drugs, and that it exists generally among the poorest of the population. Again, if the restrictions lead to the use of more deleterious substances, or even drive the people from a habit the evil of which is known to another of which the evil may be greater, they are no longer justifiable. The policy of Government must be tempered by all these considerations, and the neglect of any one of them may lead to serious error.

Objection to raising revenue from hemp drugs

587. In this connection an objection to the present system, which has been raised by some few of the witnesses, deserves a brief notice. They have laid down the maxim that the Government should not derive revenue from the vices of the people, and starting from this theory they condemn the taxation of the hemp drugs. Now, if the habit of using the hemp drugs were so disastrous as to call for suppression, and such suppression were possible, the conclusion would be just. But this is not the Commission's view, and the policy which the Government has generally adopted of restricting the use by taxation is in their opinion the right one. Taxation by itself does not imply encouragement, though the methods by which it is raised may, if not guarded, tend to encouragement. And this is perhaps the tendency which the witnesses above alluded to mean to criticise. As regards the taxing of intoxicants generally, the Commission cannot do better than quote from a standard work on political economy by Professor Henry Sidgwick (Chapter VIII, paragraph 7): "Generally speaking, it is desirable to select

for taxation commodities of which the consumption is not likely to be restricted to any great extent through the desire to avoid payment of the tax, as all such restriction increases the excess of the loss to the public caused by the tax over and above the gain to the Treasury, since the persons who are driven to consume commodities which they do not like so well suffer a manifest loss of utility. But there is one exceptional case very important in our own system of taxation in which this principle does not apply, *viz.*, where the commodity taxed is largely consumed in excess of what is salutary. So far as such excess is prevented by the tax, the restriction of consumption is positively beneficial to the community; and though legislative interference with the sole object of limiting the consumption of dangerous commodities is emphatically condemned by advocates of natural liberty, they have not for the most part pushed their antagonism so far as to maintain that the selection of taxes ought not to be partly influenced by this consideration." In the opinion of the Commission, the general principle may be fearlessly asserted that it is right to tax intoxicants; and the higher they are taxed the better, provided the considerations mentioned in the last paragraph are not lost sight of. The primary object of such taxation should not be the enhancement of the revenue, but the control of the habit; and, if this end is kept in view, the revenue which flows into the Treasury from this source need be viewed with no more suspicion than the fines on criminals for breaches of the law. If it is necessary to put briefly in words a description of what the policy of the Government should be in regard to the hemp drugs, it would be somewhat as follows: To control their use, and especially their harmful use, in such a manner as to avoid a worse evil, and, subject to this proviso, to tax them as fully as possible.

Systematic treatment necessary.

588. In order to bring about such control as will enable Government to deal thoroughly with the question, systematic treatment is necessary. The system approved for one province must not be reversed in the next. A standard of administration consistent with itself must be put before the Native States, which in many cases are interlaced with British territory, or it will be impossible for them to co-operate. On this subject the evidence of Mr. J. W. Neill, Judicial Commissioner, Central Provinces, may be quoted. He says: "I think in the case of a drug so generally consumed as ganja, the system of taxation and control should be, if not uniform for all provinces, yet on somewhat the same lines, and that the tax should fall, if not at the same rate, still at such rates that there should be no great temptation to smuggle from one part of British India into another." It is doubtless owing to the same feeling that Mr. Cadell, Member of the Board of Revenue, North-Western Provinces, records his opinion that "the present system of taxation (in those provinces) is not worthy of maintenance," and that "other Governments should not alter rates of taxation where other provinces are concerned without consulting them." This is also no doubt what underlies the opinion of the Madras Board of Revenue given in March 1892 that "restrictions will gradually have to be placed on the cultivation, possession, and transport of ganja." In this connection the opinions of Mr. Vidal, Chief Secretary to Government, and Mr. Reid, Commissioner in Bombay, may be quoted to the effect that there is no reason why the hemp drugs should be cheaper in that Presidency than in other provinces; and that of Mr. Rivaz, First Financial Commissioner in the Punjab, that hemp drugs in that province are insufficeintly taxed

Question of introducing a Government monopoly for hemp drugs discussed.

589. The Commission have considered the question of adopting in respect of ganja, and possibly also of charas, a system of Government monopoly similar to the opium excise system. The Bengal Government considered this question both in 1877 and in 1887, and declined to entertain the proposal. In this province there are now several advocates of the system, *viz.* :—

(1) Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue,

(17) Mr. K. G. Gupta, Excise Commissioner,

(13) Mr. H. C. Williams, Collector,

(12) Mr. A. C Tute, Collector,

(11) Mr. F. H. B. Skrine, Collector,

(33) Mr. R. H. Renny, Deputy Commissioner,

(30) Mr. A. E Harward, Officiating Collector,

and seven other official and non-official witnesses. And Mr. Nolan, Commissioner, (7), though he is averse to the idea of a Government monopoly, advocates the establishment of a single centre for the whole of India from which the supply of ganja should be issued, its production being prohibited in all other places; and adds that the wants of all India could be supplied from Naogaon. It is almost needless to say that if such a proposal were entertained, the monopoly of supply must rest with the Government, and the Commission are by no means inclined to think that the arrangement would be a good one. The arguments for a Government monopoly are that the control of supply, quality, and price of the drug would be more complete; that Government would secure the profits now enjoyed by wholesale vendors or other middlemen; that consumption would be limited to the minimum demand; and that the cultivators of the plant would be in a better position in having to deal direct with Government. The Commission have given full consideration to these arguments, and have arrived at the conclusion that the objections to the system on the whole outweigh its recommendations, while the objects above enumerated can be sufficiently attained without its adoption. There is in the first place the sentimental objection to Government identifying itself more closely with the traffic—an objection to which, having regard to the best interests of the people, the Commission are not disposed to attach much weight, while, on the other hand, it is most probable, if the measure were adopted, that the motive would be misunderstood and the policy severely criticised by those who are not acquainted with the facts. But the practical objections are more serious. The Government would be undertaking an enormous risk in purchasing the whole of the produce and storing and distributing it to the different provinces. For ganja or charas is a perishable commodity to a greater degree than opium, and the demand for the whole of India and for most of the provinces is very little known. Again, the establishment of such a system would require an amount of attention and detailed administration not only involving large expenditure in the appointment of a separate department, but also much of the time and energies of superior servants of Government which could not be spared from the ever increasing demands of the general administration. Further, the administration of the excise on hemp drugs is in most provinces in a backward state, and the arrangements are by no means ripe for the assumption by Government of operations at present conducted by private enterprise under conditions but imperfectly ascertained. And, finally, such a system would involve complete and

final arrangements with the Native States, which, even if ultimately practicable, would take an indefinite time to elaborate, and would probably be regarded by them with disfavour. All, therefore, that the Commission are prepared to say in favour of a Government monopoly is that after full consideration they are unable to discover any well founded objection to it on the ground of public morality, and that in their opinion the Government need not be deterred from adopting it on this ground if the practical objections which have been mentioned above are in regard to any part of British India either at the present or at any future time deemed to be of less weight than the Commission have attached to them.

Supervision by Government of India necessary.

590. But while opposed to this amount of interference, the Commission feel strongly that a regulating influence is necessary, and should in future be exercised by the Government of India over the various systems of administration of the excise on hemp drugs which prevail in the different provinces and in the Native States. A standard of administration and taxation is essential to the proper treatment of the whole subject. Existing differences are so great that it will take time to bring about any measure of uniformity, but the Commission, as will be shown hereafter, have found no reason for maintaining the present inequalities, and no serious obstacle to the gradual harmonizing of the different systems.

CHAPTER XV.

EXISTING SYSTEMS DESCRIBED.

Systems of excise in the various provinces.

591. The various systems of excise administration obtaining in the different provinces have been described in the memoranda which are published in Vol. III Appendices. A brief notice of these systems will be reproduced here, and the question how far they fulfil the conditions of the policy above noted will then be discussed.

Bengal. Law in force.

592. The law in force in Bengal is contained chiefly in the Bengal Excise Act, VII of 1878, and rules passed thereunder. The principal provisions are as follows:—

Without a license from the Collector, the manufacture of ganja, charas, and bhang, and every preparation and admixture of the same, and the cultivation of plants from which they are produced, are prohibited (section 5).

No person is allowed to sell any of the above drugs or preparations or admixtures of them without a license from the Collector (section 11).

Fees for licenses for retail sale of the above drugs may be fixed by the Board of Revenue, and will be payable accordingly (section 13).

No license fees are leviable for the privilege of wholesale vend. The limit for retail sale is as follows: Ganja or bhang, or any preparation or admixture of the same, one quarter of a sér; charas, or any preparation or admixture of the same, 5 tolas weight. No licensed wholesale vendor is allowed to sell by retail and no licensed retail vendor is allowed to sell by wholesale, but the same person may hold a license for wholesale and retail vend. The Board may fix a larger quantity as the limit for retail sale (sections 15 and 60).

No cultivator of the plants producing ganja or bhang may sell such plants, or any ganja or bhang produced therefrom, to any one other than a person duly authorized to purchase the same by pass or license from the Collector (section 16).

No person, not being a licensed manufacturer or vendor or a person duly authorized to supply licensed vendors, may have in his possession a greater quantity of ganja, charas, and bhang, or any preparation or admixture of the same, than that specified above as the limit for retail sale (section 17).

The penalty attached to the breach of this provision does not apply to authorized cultivators (section 62).

The Board may, with the sanction of the Local Government, declare that the possession of any foreign ganja, charas, or bhang, or any preparation or admixture of the same, is absolutely prohibited in any specified tract, or that such possession shall be limited to specified quantities, unless a license has been granted for the possession of a larger quantity of such article. The Board may fix the fee or duty payable for such license (section 17-A). Under this section the limit of legal possession of Garhjat ganja has been fixed at 5 tolas.

The Board, with the sanction of the Local Government, may frame rules for prescribing the conditions under which ganja, charas, or bhang, or any preparation

or admixture of the same, manufactured in any part of British India beyond the territory to which the Act extends may be imported, and, where no duty has previously been paid on such articles, the conditions under which they may be imported and bonded within such limits (section 19-A).

The Collector may, with the sanction of the Board, let in farm the duties leviable on the abovementioned drugs, or any of them, in any district or division of a district (section 20).

The Board may prescribe rules for the invitation and acceptance of tenders for such farms, for the requisition of security for the due fulfilment of the engagements entered into by the farmers, and as to the form and conditions of the lease. The Board may regulate the form and conditions of all licenses granted under the Act (section 28).

The Board may frame rules for the grant of licenses or passes to persons purchasing, transporting, or storing ganja, charas, or bhang for the supply of the licensed vendors of those drugs, and may place the cultivation, preparation, and store of such drugs under such supervision as may be deemed necessary to secure the duty leviable thereon (section 35).

Manufacture not defined

593. With reference to the above provisions, the Commission observe that there is no definition in the Act of "manufacture," and that, apart from the provision relating to possession, the collection of bhang from the hemp plant, which hardly comes under the designation of "manufacture," does not appear to be prohibited or controlled.

The system in Bengal: Rajshahi ganja.

594. The system which has been elaborated under these provisions of the law will now be briefly described. Though the hemp plant grows spontaneously in many districts of Bengal, this fact does not seem to affect the ganja administration to any great extent, as ganja, except of a very inferior sort, cannot be manufactured from the wild plants. Cultivation of the hemp plant for the production of ganja is only allowed in an area of about 64 square miles in the Rajshahi Division. Every cultivator has to take out a license for which no fee is charged. Within the area above mentioned, which, for the purposes of ganja administration, is placed under the jurisdiction of the Collector of Rajshahi, though it lies in the three districts of Rajshahi, Dinajpur, and Bogra, applications for licenses are granted, unless there be any valid objection, and remain in force for one working year. The average area of ganja cultivation is 2,220 bighas, equal to 740 acres. What follows is in the words of the Hon'ble D. R. Lyall, C.S.I., Member, Board of Revenue: "The cultivation is inspected by supervisors throughout the period of growth, the areas cultivated being compared with the licenses. The cultivator cuts his crop not necessarily under the supervisor's eye, nor does he require to get permission, but he gives 3 days' notice of his intention to cut. The manufacture is done by the raiyat at his own option as to time and place. The supervisors move about and supervise the manufacture as far as they can. Practically the bulk of the manufacture is not completed under the supervisor's eye. When the manufacture is complete, the raiyat carries his produce to his own store under the latter part of rule 11 of section xx of the Excise Manual, page 155, there being no public godown large enough to

receive the whole crop. A license is given to the raiyat describing the quantity and kind of ganja he is allowed to store, and authorizing him to keep it until he disposes of it to a licensed purchaser. The amount is arrived at by the supervisors by inspection of the crop after manufacture and the number of bundles into which it is manufactured. The crop is made up by the raiyat into 2-sér bundles, and by long practice the measurement is wonderfully exact, though it is done by guess. The raiyats' store is generally situated close to his manufacturing ground. The wholesale dealer comes to the *mahal* armed with a license from the Collector of his own district giving the amount he is authorized to export. He makes his own arrangements with the raiyats, visiting any store he likes, and, as far as I know, unaccompanied by a supervisor or any excise officer. Having made his bargain, the dealer brings the ganja to the Government gola, where it is weighed, and the sale recorded on the back of the raiyat's license as well as in the Government books. No pass is required for the removal of the ganja from the raiyats' store to the Government gola. The dealer's consignment is sealed at the Government gola, and then carried by the wholesale dealer under pass to his gola at the head-quarters or sub-division of the place of import. There it is placed under double lock, one being in the possession of the dealer, and the other in the possession of the Excise Deputy Collector. The wholesale dealer sells to the retail vendor at his own price, and the retail vendor sells to the public at his own price, except in one district, where a maximum limit is imposed under the terms of the arrangement with the monopolist. This district is Cuttack. The right of retail vend is sold by auction."

Where the existing practice differs from the rules.

595. The above procedure differs in one important respect from that prescribed in the rules issued by the Board, inasmuch as these rules contemplate the storing of the ganja in a public gola, and there is an exceptional provision permitting storage in a private gola, when a cultivator can satisfy the supervisor that he has a secure private place of his own. He is then allowed to store his ganja there subject to periodical inspection by the supervisor or his assistants. There is no public gola for the storage of the crop, hence the exception has become the rule.

Garhjat ganja and illicit practices

596. Ganja is not ordinarily imported from any other British province into Bengal, but ganja grown in the Orissa Tributary Mahals (Garhjat) is imported under passes in small quantities into the districts of the Orissa Division. The rules as to storage and levy of duty on Rajshahi ganja apply *mutatis mutandis* to Garhjat ganja. Any vendor licensed to retail Rajshahi ganja may sell Garhjat ganja under the same license. The Excise Commissioner states that Garhjat ganja is largely smuggled into Orissa. This subject will be again mentioned further on. With this exception, the growth and trade in ganja in Bengal is fairly under control. The cases of illicit cultivation are few. They are all of a petty description, such as the growing of a few plants (very often only a single plant) in the courtyards of houses more for the purpose of using the leaves as bhang than for manufacturing ganja. Cases of unlicensed sale of ganja, though comparatively numerous, generally represent sales of the excised drug by petty dealers who have obtained their supplies from licensed vendors, and often occur from the licensed shops being too few to supply the local demand. The system in force in the Ganja

Mahal in the Rajshahi Division gives some opportunity for illicit disposal of the ganja, partly owing to the inadequacy of the supervising staff, and partly to the storage arrangements above mentioned; but the principal authorities are of opinion that very little smuggling actually occurs. Mr. Lyall, while admitting that the facility afforded for smuggling constitutes the weak part of the Bengal system, gives the following reasons for his belief that it does not exist to any extent: "One at least is that I have never come across a case of smuggled ganja, though cases of opium smuggling are not uncommon. The safeguards against illicit practices are the concentration of the area of growth and the crop estimate made by the supervisors when the crop is on the ground. The bulkiness of ganja is an additional safeguard as compared with opium. We have never within my knowledge discovered a cultivator disposing of his crop illegally. Of course, if there were collusion between the protective establishment and the cultivators, this safeguard would be of little use; but, as a fact, I believe the establishment is trustworthy"

Charas.

597. Charas is not made in Bengal. A very small amount is imported from Upper India under passes, and after paying duty is sold by licensed vendors.

Bhang.

598. There is no licensed cultivation of the hemp plant for production of bhang in Bengal. Bhang is either imported from the North-Western Provinces or collected for the market from the spontaneous growth which abounds in Bhagalpur and in districts north of the Ganges, especially Monghyr and Purnea. It has been observed above that this collection of the leaves hardly comes within the term "manufacture," and no license is, therefore, legally necessary for the process. But legal possession of bhang, except by licensed persons, is limited to ½ sér, hence all transactions of any importance require a license. On the other hand, there is no restriction on the use of the hemp plant in its green state. It is only when prepared to be used, stored, or sold as a narcotic or stimulant that it comes under Excise rules. Passes are required for the purchase or obtaining of bhang for export to another district, or for sale, which must be accompanied by a license from the Collector of the district into which the bhang is to be conveyed, or in which it is to be stored. The rules for storage are similar to those for ganja, and a small duty is levied when the bhang is removed from the warehouse to be taken to the shop for retail sale. The extensive growth of the plant in the districts above mentioned renders control of transactions in bhang very difficult, and it is certain that the amount brought to record and dealt with under Excise rules does not by any means represent all the bhang consumed in Bengal. "The use of untaxed bhang," says the Excise Commissioner, "is general." In January 1893 orders were issued by the Excise Commissioner with the object of extirpating the spontaneous growth of the plant, and thus bringing bhang under more efficient excise control; but the orders were cancelled by the Bengal Government in the following June on the ground that the attempt was impracticable, and likely to have no result except petty oppression. There is therefore practically little control over the production and use of bhang in Bengal; and although the revenue from excise bhang has increased considerably, this is mainly owing to the fact that the duty is very low and not worth evading on the part of the licensed vendors.

599. The Act is almost silent on the subject of wholesale vendors. The agency by which the retail vendors are supplied has grown up from the exigencies of the case. Every wholesale vendor must rent one of the warehouses provided by Government for storing ganja, or must provide one to the satisfaction of the Collector who grants the license. Where warehouses are provided by Government, the Commissioner determines the number of private warehouses, if any, to be licensed. The number of wholesale dealers in any place must not exceed the number of Government and licensed warehouses. Where the number of applicants exceeds the number of Government warehouses, the leases of the latter are put up to auction. These middlemen reap large profits, and to a large extent control the market. They very often combine the functions of retail vendor with those of wholesale vendor. Mr. Price, Collector of Rajshahi, says of them that they superintend the manufacture of the ganja to suit their own tastes, and practically become the owners of the ganja without assuming the responsibilities that devolve on them. He says that their absence from the ganja tract would itself cause the decline of the cultivation. Out of this state of things another class has arisen in the ganja brokers. These men negotiate for the sale of the standing or manufactured crop to wholesale vendors. Forms of licenses to ganja brokers and wholesale vendors have been issued by the Board.

Wholesale vend.

600. For the retail vend of ganja, charas, and bhang separate licenses are issued. There is no restriction as to the price at which the drugs are to be sold to the public. The number of shops is fixed by the Collector according to the demand for the drug. The licenses are sold by public auction for one year. Notwithstanding occasional fluctuations, the number of ganja shops has been reduced in the last 20 years from 4,398 to 2,672. The number of charas shops decreased largely down to 1889-90, since when there has been an increase, but not nearly to the former figure. The number of bhang shops has been more stationary. Consumption on the premises is not prohibited. There is no restriction as to the persons to whom the drugs may be sold. Local opinion is not ordinarily consulted regarding the establishment of shops, but attention is paid to any reasonable objection raised against any particular site.

Retail vend.

601. The revenue from hemp drugs in Bengal is realized in the form of direct duty and license fees for the right of retail vend at a fixed shop only. The duties per sér levied on the drugs warehoused are as follows:—

Taxation.

	For the province generally.			For the Orissa Division		
	Rs.	A.	P.	Rs.	A.	P.
Ganja:						
Chur ...	9	0	0	7	8	0
Round ...	7	8	0	6	4	0
Flat, small twigs	7	4	0	4	8	0
" large "	6	0	0			
Charas ...	8	0	0	8	0	0
Bhang ...	0	8	0	0	8	0

The duty is levied before the drugs are removed from the wholesale dealer's warehouse. The duty is calculated on the actual weight of the drug issued,

except in the case of charas, half the duty on which is levied at the time of taking out the pass for the importation of the drug.

The importance of the ganja traffic in Bengal may be gathered from the fact that in the year 1892-93 1,510 maunds were exported to other provinces and 5,451 maunds paid duty, amounting to Rs. 12,80,631. The license fees for retail sale of ganja amounted to Rs. 11,05,435 in addition. The total revenue from charas, of which only 11 maunds 26 sérs paid duty, was Rs. 9,097, and from bhang, of which 1,033 maunds paid duty, Rs. 53,558.

Assam.
Law in force.

602. The law in force in Assam is the same as in Bengal, and the Bengal Excise Manual is followed.

Supply of the drugs.

603. There is no licensed cultivation of hemp for the production of the drugs. Excise ganja is supplied from Bengal under pass, and pays duty in the province. The vend of charas and bhang is practically forbidden, as no licenses for their sale have been taken out. Wild hemp grows spontaneously in many parts of the province, and especially in the hill tracts. The officiating Excise Commissioner says: "There is nothing to show that the trade in the wild plant is sufficiently large to compete seriously with excise ganja, unless possibly in the Khasi Hills, where the continuous decrease in the consumption of the Rajshahi drug can, I think, only be attributed to the cheapness of wild hemp and the great facilities for its use. The excise administration of the district is attended by abnormal difficulties owing to the fact that the Khasi Hills are parcelled out into the territories of many semi-independent chiefs. The wild plant is used by habitual consumers only as a *pis aller*, and when their supply of the excise ganja runs short." This view is not shared by the Excise Commissioner, Mr. Driberg, who says: "I think this so-called wild hemp affects our revenue very considerably. It is used by certain consumers, and is also mixed by vendors with excise ganja and sold." Mr. Driberg states that he does not think there is any such thing as wild ganja. As a rule the plant is found in lands occupied by the owner's homestead. From this he infers that the growth is very ordinarily surreptitious. He thinks that the practice of Deputy Commissioners in treating this growth as unlicensed cultivation differs considerably. A circular issued by the Chief Commissioner in October 1882 contains a ruling which appears to be the cause of this diversity of practice. The concluding portion runs as follows: "You will observe that in rule 2, section 17, of Chapter XV, of the Board's Rules it is said that 'no restriction is imposed on the use of the hemp plant in its green state for medical or other purposes, or on its manipulation for the manufacture of fibre. But any preparation of the plant to be used, stored, and sold as a narcotic or stimulant is prohibited except under the rules framed by the administration.' This rule mentions the medicinal use of the plant only 'in its green state;' but if, as appears to be the case, the wild hemp is also used for medicine for cattle when dried, the Chief Commissioner desires that the rule may be liberally interpreted, and no penalty imposed when it is probable that the cultivation or the drying and storing of it was only for this purpose. Whether this is so or not is a question of fact." Mr. Driberg, whose experience of Assam is unique, does not believe that the plant is used to any

extent for cattle. He thinks that it is a mere excuse made by those who really want to use it. He thinks the circular was unnecessary, and issued on insufficient information. The subject is discussed in Chapter X.

System of vend and taxation.

604. The system of vend is the same as in Bengal. The amount of ganja which paid duty in 1892-93 was 620 maunds, representing duty to the sum of Rs. 1,39,545. License fees amounted to Rs. 1,64,088.

North Western Provinces. Law in force.

605. The excise on hemp drugs in the North-Western Provinces is administered under Act XXII of 1881 and rules thereunder. The principal provisions of the law are as follows:—

The chief revenue authority may from time to time make such rules to restrict and regulate the cultivation of hemp and the preparation of intoxicating drugs therefrom as it may deem necessary to secure the duty leviable in respect of those drugs (section 11).

No intoxicating drug may be sold except under and in accordance with the terms of a license granted under the provisions of the Act. But any cultivator of the hemp plant may sell any intoxicating drug prepared from his plant to any person licensed under the Act to sell the same, or to any person authorized to purchase the same, by the Collector's order in writing (section 12).

Subject to the rules made by the chief revenue authority under the power conferred by the Act, the Collector may grant licenses for the retail sale of intoxicating drugs within his district, or any part thereof, or at any place therein. Licenses for the sale of intoxicating drugs wholesale may be granted only by such officer as the Local Government from time to time appoints (section 13).

The Collector may, with the sanction of the chief revenue authority, let in farm the fees leviable in any district or part of a district on licenses for the retail sale of intoxicating drugs (section 16)

No person may have in his possession any larger quantity of the drugs than that specified as the limit of retail sale unless he is permitted to manufacture or sell the same. This amount is—

Ganja or charas, or any preparation or admixture thereof, 5 tolas.

Bhang, or any preparation or admixture thereof, one quarter of a sér (section 22).

The chief controlling revenue authority may from time to time make rules consistent with the Act as to the fee payable for each license or farm and as to the form of any license or farming lease (section 55).

The Act contains no provision relating to manufacture, import, export, or transport.

Supply of the drugs.

606. Under the rules now in force the cultivation of the hemp plant is free to all parties. There is no check therefore on the production of hemp drugs, and the possession of the drug without limit of amount is permitted to all cultivators, to owners of land in which the plant grows spontaneously, to licensed vendors, or to persons duly authorized to supply licensed vendors. This permission is also considered to

apply to the sale of their bhang by owners of spontaneous produce. Restriction, therefore, only operates when the cultivator sells his produce, and there is practically little, if any, check on the supply of the drugs produced in the province. The Excise Commissioner states that ganja of fair or good quality can be made, and is made locally. Charas is produced to some extent in Kumaon; and as the hemp plant grows abundantly in all the montane and submontane districts, bhang can be produced to any extent.

Imports of the drugs.

607. The ganja consumed in the province is mainly derived from Bengal, the Central Provinces, Gwalior, Bundelkhand, and, in small quantities, from Nepal and Indore, possibly also from Rewah. Where the production of this ganja is under excise management, these imports are of course subject to such management. The importers of ganja and bhang are said to be all contractors holding licenses for the sale of the drugs. Charas is brought by Punjabi traders, who sell to the contractors. These traders take out no licenses, and the Excise Commissioner states that the legality of the arrangement is questionable. Some of these traders themselves hold district contracts. Nearly the whole of the bhang consumed is grown in the province. A certain amount is imported from the Punjab, and goes chiefly to the western districts.

Notwithstanding the silence of the Act regarding import of the drugs, a rule has been passed that no ganja, charas, or bhang shall be imported into the province except under a pass. No import duty is levied. Transport and export are also made subject to a free pass.

Smuggling.

608. The Excise Commissioner is of opinion that the amount of smuggling from outside the province is quite inconsiderable, and this is confirmed by the Hon'ble A. Cadell, the Member of the Board in charge of Excise, and there is no very definite evidence to the contrary.

Defect in the North-Western Provinces system of supply.

609. The weak point in the North-Western Provinces system of supply is that the ganja which comes from the different provinces and States abovementioned is taxed before it reaches the frontier at widely different rates, and there is no equalization of this taxation after it has reached the province. Bengal ganja pays from Rs. 6 to Rs. 9 per sér, the Khandwa ganja pays no duty but small fees which may amount to Rs. 2 per maund, Gwalior ganja less than Rs. 5 per maund, and Bundelkhand ganja possibly as much as Rs. 2 per maund. And these different kinds of ganja are freely available under existing regulations to the licensed vendor, who has it in his power to play them off on the consumer in such a way as will best repay him without damaging his credit. In addition to this, the cultivation and manufacture of ganja locally is under no legal control. It is unnecessary to say more on this subject, as the Excise authorities have recorded their opinion that the present system needs reform, and proposals have been made which will be considered further on.

System of vend.

610. The right of selling the drugs is farmed to contractors, who are at liberty to procure the drugs wherever they like, and sell them at any price they choose. No distinction is drawn between the different kinds of drugs all are included in

the same license, and are stored by the farmer on his own premises. The contracts are usually for an entire district; in some cases for tahsils or parganas. There is nothing to prevent a contractor having separate contracts for several districts. The ordinary period is for one year, but contracts are now often given for two or three years, and the longer periods always fetch proportionally higher sums. The number and locality of the retail shops is fixed by the Collector subject to the orders of the Board, and is revised from time to time. The contractor either sub-lets the shops or works them through his servants. As a rule he holds the best shops in the large towns in direct management and sub-lets the rest. The contracts are sold by auction. The number of capitalists engaged in the trade is not very large, and nothing is commoner among them than combinations to keep down the price. The above account is taken from the Excise Commissioner's memorandum, who adds: "It is a defect in the system that it leaves the whole of the revenue collected here to be determined by the competition of the auctions. The advantages of the system are that a large revenue is very easily and cheaply collected, and that smuggling and other evasive illegal acts are minimized. The contractor has no reason to commit them himself, and it is his interest to detect any one attempting them. This is no small advantage from an administrative point of view. Retail prices are under the existing system kept at the highest possible point."

Consumption of drugs on the premises is not prohibited in the shop licenses, nor is there any restriction as to the persons to whom the drugs may be sold. Local opinion is not ordinarily consulted. Mr. Cadell says: "Hitherto the objection to shops has always come from above, *viz.*, from the Board, the Commissioner, or the Collector."

Statistics.

611. The statistics of import and export are very defective. The Excise Commissioner estimates the average imports of ganja and charas as follows:—

Ganja	...	...	...	... 4,000 to 4,500 maunds.
Charas	...	...	...	... 1,100 to 1,200 "

The license fees realized from the auction of the monopoly of vend amounted to Rs. 7,04,788, and this represents the whole of the taxation levied in the province.

Punjab.
Law in force.
Supply of the drugs.

612. The excise administration is based upon Act XXII of 1881 (see North-Western Provinces) and rules thereunder. Ganja is practically unknown in the Punjab. Charas is imported from Yarkand *viâ* Kashmir and Ladak and from Bokhara, and perhaps other Central Asian countries *viâ* Afghanistan. No charas is produced in the province except to a trifling extent in the hills for private consumption.

Bhang is collected from the wild plant which grows plentifully in the Sub-Himalayan districts. It is also cultivated to a small extent in Multan and in the Derajat Division, but the total area of cultivation is probably less than 100 acres. Cultivation is not controlled, and a cultivator cannot be prosecuted for the possession of bhang, though he is only allowed to sell his produce to a licensed vendor.

Import and transport.

613. The traders who bring charas from Yarkand are not licensed, but they have to obtain a pass from the Joint Commissioner at Leh or from the Deputy Commissioner of the

district where they enter the Punjab, and take it for countersignature to the Deputy Commissioner or Collector of every district in the Punjab or the North-Western Provinces which they may enter with the charas. The consignment may be opened at any head-quarters station or tahsil while on its way to its destination, and a portion of its contents may be sold to the farmer of excise for drugs, the fact being recorded on the pass and the package resealed. When a consignment is conveyed by rail, the provision requiring it to be taken to the Deputy Commissioner or Collector of every district through which it passes is dispensed with. The transport of bhang from the districts of growth to those of consumption is regulated by passes, no duty or fee of any sort being charged.

Excise system

614. Hitherto the excise income from intoxicating drugs in the Punjab has been derived solely from the monopoly of sale within tahsils or other sub-divisions of districts. In some districts the monopoly of opium and other drugs prepared from the poppy is farmed separately from that of the hemp drugs, while in others the same farm includes both. Ordinarily the farm or license is held for the year, the fee payable being determined by auction. The present rules make no provision for the issue of wholesale licenses, but the new rules are to provide for such licenses. As a matter of account the fees paid in each district in respect of the combined opium and hemp drug licenses, where these are held together, are distributed between the two heads of receipt in a proportion which is supposed to represent the actual value of each set of licenses. This proportion varies from district to district. As a result of the practice described above, the number and locality of the shops are fixed beforehand from year to year, and as a matter of fact they are seldom altered.

The Punjab system of excise administration in regard to hemp drugs was described by the Excise Commissioner in his report for 1892 as "going very near to reversing the principle of a maximum of revenue with a minimum of consumption." In the report for 1893 the Excise Commissioner says: "Taking Rs. 1,70,854 to be approximately the real value of the licenses for the sale of hemp drugs, it represents the total taxation now levied on a consumption of upwards of 1,000 maunds of charas and of nearly 4,000 maunds of bhang." This is "the weakest part of our excise system in the Punjab It is hoped that we are now within measurable distance of arrangements which will give us complete control over the import trade in charas, and enable us to impose a duty which can be gradually raised. Owing to the fact that the plant grows wild in so many districts, and is to be had for the gathering, while charas comes in by a few well recognised routes and can scarcely escape us, it is much more difficult to deal with the trade in bhang efficiently. But I am in hopes that the Government will agree before very long to the introduction of some measures for the direct taxation of bhang too."

In the form of license for retail vend of the drugs, there is no provision against consumption on the premises. There is a provision prohibiting the supply of the drugs to any insane person or to children. It may be noted, though the matter is of no practical moment in the Punjab, that the limit of retail sale for ganja is fixed in this form at ¼ of a sér as for bhang, whereas under the Act it must not exceed 5 tolas. It seems to be the practice to consult the wishes of the people before new shops are opened.

Proposal to tax charas and bhang.

615. The question of imposing a duty on charas and bhang, to which reference is made above, has been very fully discussed, and an Act (X of 1893) has been passed in which power has been taken to impose on any intoxicating drug brought by land from beyond the limits of India into any territory to which Act XXII of 1881 extends, or into any specified part thereof, such duty as the Governor-General in Council thinks fit. In pursuance of the provisions of this enactment, it has been proposed to establish golas to which all charas should be taken on entering the province, and which it should be allowed to leave only under a license or pass, for which a fee should be levied at the rate of 8 annas a sér. The revision of the Excise rules so as to give effect to this proposal is under consideration. The taxation of bhang is a more difficult matter owing to the prevalence of the growth of the plant, and the consideration of proposals relating thereto made by the Excise Commissioner has been postponed until the tax on charas has been introduced. The opinion of the Punjab Government on this question is that "in regard to matters of this sort, which involve an interference with ancient and firmly rooted habits of large masses of the people, it is desirable to proceed cautiously, doing one thing at a time."

Central Provinces.

Law in force

616. In the Central Provinces Act XXII of 1881 is in force (see North-Western Provinces).

Supply of the drugs

617. In this province, however, advantage has been taken of the provisions of the law to prohibit the cultivation of the hemp plant except under license, and licenses are now only given in the Khandwa tahsil of the Nimar district. The plant does not grow wild, and illicit cultivation has for the most part been suppressed. Charas is hardly known. If imported, it pays a duty of Rs. 10 per maund. No bhang properly speaking is produced, but the refuse ganja is used as bhang.

The supply of ganja is amply sufficient for the provincial consumption. Import of ganja from other provinces or Native States is not permitted. There is a certain amount of illicit import from Hyderabad, Berar, Indore, the Bombay Presidency, Gwalior, and the Tributary States of Orissa, and this constitutes the principal difficulty of the ganja administration in this province. A little bhang is imported from the North-Western Provinces under passes.

Khandwa ganja.

618. The harvesting of the crop in the Khandwa tahsil is supervised by a special establishment, and the cultivators are bound to bring the whole of their produce to a Government storehouse at Khandwa. The drug is purchased at the storehouse by the wholesale vendors of the province, the terms of the purchase being arranged between the cultivators and the wholesale vendors without interference on the part of Government. Wholesale vendors of other parts of British India and foreign dealers are also freely permitted to buy. No direct tax is imposed on cultivation, but the following fees are payable at the storehouse:—

(1) A storage fee of 6 pies per maund per mensem payable by cultivators or purchasers of ganja kept in the storehouse. Cultivators and wholesale vendors of ganja in the Central Provinces are exempted from payment of this fee for 30 days.

(2) Permit fees at Re. 1 per maund payable by all purchasers of ganja, other than Government licensed vendors, on account of all ganja for which permission to purchase is granted.

(3) Registration fees at Re. 1 per maund payable by all purchasers of ganja, other than Central Provinces licensed vendors, on account of all ganja of which the transfer by sale is registered.

Wholesale vend

619. The sole monopoly of wholesale vend in the province is granted by licenses to wholesale vendors approved by the Excise Commissioner. The licenses are given either for a district or for each tahsil. Tenders are invited annually for the licenses for wholesale vend, and the tenders must state what fee per sér, in addition to a direct duty of Rs. 2 per sér (except in Sambalpur and the south-east part of the Raipur district, where it is Re. 1 per sér), the applicants are prepared to pay for the privilege. The wholesale vendor is required to supply the retail vendors with ganja at Rs. 3 per sér (Rs. 2 in Sambalpur and the south-east part of the Raipur district). The ganja purchased by the wholesale vendor is conveyed under a transport pass or import license to a storehouse belonging to the licensee at the district or tahsil head-quarters, one key of which is kept by the Tahsildar, by whom it is issued according to the requirement of the wholesale vendor. Duty is only charged on cleaned ganja, the refuse being destroyed both at the Government storehouse at Khandwa and at the district or tahsil storehouse.

Retail vend.

620. The monopoly of retail vend is usually auctioned separately for each shop, except in large towns, where the shops are generally sold to one person. The localities of all shops are fixed by the Deputy Commissioner subject to the control of the Excise Commissioner. All retail vendors are entitled to be supplied with ganja by the wholesale vendor at Rs. 3 per sér, and may charge their own retail price to consumers. The number of shops is regulated by the demand for the drug. In those districts which are specially exposed to smuggling from foreign States, shops are licensed more freely.

Every wholesale vendor of ganja is given a license for the retail vend of bhang free of charge. Licenses for retail vend of bhang are not granted to other persons, and no wholesale vendor may import without a written permit from the Deputy Commissioner. A duty of Rs. 2 per sér is levied on all foreign bhang sold, and the rate of sale to the public must not exceed Rs. 3 per sér. Stocks of bhang are kept under control in the same way as ganja.

Consumption on the premises is prohibited by a clause in the retail licenses. There is no restriction as to the persons to whom ganja or bhang may be sold. Local opinion as to the opening of shops is not ordinarily taken, but objections, if raised, are considered.

Statistics

621. The average area of ganja cultivation at Khandwa during the past five years has been 785 acres; the average outturn about 8,000 maunds, of which about 5,000 have been exported and 1,000 consumed in the province, the remainder having been destroyed as unfit for sale. The revenue derived from this source has been Rs. 2,18,000, of which Rs. 1,36,500 has been from license fees, and

the rest from fixed duty. There is no revenue from charas, and from bhang only about Rs. 1,000.

Madras.

Law in force.

622. The Madras Abkari Act (I of 1886) contains extensive provisions for the control of the cultivation of hemp, and the manufacture, sale, and possession of hemp drugs. But as it has only been brought into force in the Presidency in so far as it relates to the sale of intoxicating drugs, there is no need in describing the system at present in force to refer to any of the other provisions.

The principal provisions in force are as follows:—

No intoxicating drug may be sold without a license from the Collector, provided that a cultivator or owner of any plant from which an intoxicating drug is produced may sell without a license those portions of the plant from which the intoxicating drug is manufactured or produced to any person licensed under the Act to sell, manufacture, or export intoxicating drugs (section 15).

The Governor in Council may grant to any person or persons on such conditions and for such period as may seem fit the exclusive or other privilege—

(1) of manufacturing by wholesale, or

(2) of selling by retail, or

(3) of manufacturing or supplying by wholesale and selling by retail,

any intoxicating drugs within any local area. A license from the Collector is necessary for the exercise of such privilege (section 16). It may be noted here that there is no definition in the Act of wholesale and retail, and that no such definition exists in any notification under the Act.

A duty shall, if the Governor in Council so direct, be levied on all intoxicating drugs sold in any part of the Presidency of such amount as the Governor in Council may from time to time prescribe (section 17).

Such duty may be levied by fees on licenses for manufacture or sale (section 18).

Every license or permit granted under the Act shall be granted—

(*a*) on payment of such fees, if any,

(*b*) for such period,

(*c*) subject to such restrictions and on such condition, and

(*d*) shall be in such form and contain such particulars,

as the Governor in Council may direct either generally or in any particular instance in this behalf (section 24).

The Governor in Council may from time to time frame rules for the warehousing of intoxicating drugs, and for the removal of the same from any warehouse in which they are deposited for deposit in any other warehouse or for local consumption or export; and for placing the storage of intoxicating drugs under such supervision and control as may be deemed necessary for the purposes

of the Act; and generally to carry out the provision of the Act or of any other law for the time being in force and relating to abkari revenue (section 29).

No rules have been framed under section 29 and no notifications issued with reference to any of the above quoted provisions of the Act relating to intoxicating drugs except such as relate to the delegation of powers and the extension to local areas of those provisions.

Supply of the drugs.

623. The hemp plant does not grow wild in the plains of Madras, and even in the hills there does not seem to be much spontaneous growth. But a few plants will be found in the enclosures of houses in several parts of the province, and there is systematic cultivation of the plant for ganja in the Kistna and North Arcot districts, and to a smaller extent in some others. Accurate information regarding the area under cultivation is not available, but the amount of regular cultivation accepted by the Commission is 350 acres. From this cultivation ganja is produced and bhang is collected, though statistics of bhang separate from those of ganja are not available, and the bhang of this province is probably in many cases only refuse ganja. Charas is not known.

Ganja is said to be imported in small quantities from the Hyderabad, Bastar, and Banganapalle States, and exports made to Ceylon, Mysore, Hyderabad, and Cochin territory. From other sources it has been ascertained that there is a considerable quantity of Madras ganja smuggled to Burma and Mysore, and that the administration of this branch of excise in the latter tract is thereby rendered difficult. Apart from smuggling, the exports of ganja from Madras to Mysore amounted to 1,829 local maunds (equal to 552 Indian maunds) in 1892-93. This alone represents a considerable area of cultivation; and, judging from the consumption within the Presidency, it appears probable that the area of cultivation has been under-estimated.

System of excise.

624. The only system of administration which exists in regard to the hemp drugs consists in the restriction of the sale of these drugs to licensed vendors (with the proviso contained in section 15), and no limit of retail sale having been fixed, any person may purchase any quantity of the drugs from a licensed vendor.

Up to 1st April 1891 licenses for sale were granted on payment of fixed fees, and the amount realised from these fees was in the year 1890-91 Rs. 8,805 as compared with Rs. 4,890 the previous year. In 1891-92 the system of selling the licenses by auction was introduced, and the amount realised was Rs. 54,989. In 1892-93 it was Rs. 47,292.

The number of shops is determined by the Collector, subject to the Board's approval, and no increase can be sanctioned without the special orders of the Board obtained in each case. No form of license is to be found in the Madras Excise Manual.

There are only 246 retail licenses for the whole Presidency, or one shop for 144,781 of the population. The evidence shows that a good deal of the consumption does not pass through the shops, and that in certain tracts the drug passes freely from the cultivator to the consumer.

625. The system of administration is based upon the Bombay Act V of 1878, and rules and notifications thereunder. The principal provisions are as follows :—

Bombay.
Law in force.

Import of intoxicating drugs into any part of the Presidency is prohibited save under permit and after payment of duty, if any. If the drugs have paid customs duty, this provision does not apply (section 9).

Export is prohibited save under the same conditions. This provision does not apply to drugs imported by sea, the export of which is permitted on payment of any fee or duty, if any, leviable by law on its transhipment or exportation (section 10).

Transport of any quantity of intoxicating drugs exceeding 40 tolas is prohibited save under permit (section 12).

Manufacture is prohibited save under license (section 14).

Sale is prohibited save under license : provided that no such license is necessary for the sale by a cultivator or owner of any plant from which an intoxicating drug is produced of those portions of the plant from which the intoxicating drug is manufactured or produced to a licensed vendor, manufacturer, or exporter (section 16).

The maximum quantity which may be sold by retail at one time or to one and the same person in the aggregate on any one day within any defined local area or place is half an Indian sér or 40 tolas (section 17 and notifications thereunder).

Whenever a license is granted for the manufacture or sale of any intoxicating drug, and whenever the import, export, transport, or removal from place to place of any intoxicating drug is permitted, such duty shall be levied as the Collector, acting under the general or special order of Government, thinks fit (section 27).

Under this section notifications have been issued prescribing that the duty leviable on account of a license for the joint privileges of manufacture and retail sale of intoxicating drugs shall be fixed by the Collector, who before granting any such license shall put up the said privileges to auction.

For a permit for the import or export of any intoxicating drug, or for its transport between any two places not situated within the same district, duty subject to certain exemptions is levied at the following rate :—

	Rs.
If the amount does not exceed 10 Indian maunds	5
For every additional 2 Indian maunds or fraction thereof ...	1

Every license, permit, or pass granted under the Act is granted—

(*a*) on payment of such fees, if any,

(*b*) for such period,

(*c*) subject to such restrictions and on such conditions, and

(*d*) shall be in such form and contain such particulars as Government directs (section 30).

626. The wild plant is not much found in Bombay. There is cultivation of hemp for the production of ganja in a few districts, principally in Ahmednagar and Satara. The average for five years is 874 acres. The cultivator has to obtain a permit, for which no fee is levied, to enable him to dispose of his produce. The Excise Commissioner states that the cultivation is noted and watched by the village officers, and he cannot dispose of his crop without obtaining the necessary permit. There is not much evidence of the cultivation of plants in homesteads and enclosures for private use, but Mr. Sinclair, Collector of Thana, alludes to such cultivation as occurring in many private gardens. The amounts of imports of ganja from other provinces given in the statistics supplied by the Commissioner of Excise show an average for the last ten years of 1,820 maunds, and that officer in his memorandum states that the imports are chiefly from the Central Provinces. In view of the evidence the figures seem excessive, and a doubt suggests itself to the Commission whether imports from district to district have not been included.

Sources of supply in Bombay.

Charas is imported in very small quantities from the Punjab. Except in the City of Bombay, it is hardly known. Bhang is produced to a small extent in Gujarat and Palanpur. It is imported from Ujjain. The average imports for the last ten years amount to 87 maunds, but not much reliance can be placed on these figures. Probably wherever the hemp plant is grown for ganja, a certain amount of bhang is also produced.

Bombay is intersected with a large number of Native States, in some of which ganja is grown. The illicit import of this ganja does not seem to be very extensive, but owing to the cheapness of the drug in these States, and to the high maximum of legal possession (40 tolas), it is inevitable that a certain amount of smuggling should take place, and this is considered to be the case by several witnesses.

627. The rules provide that the joint privilege of manufacture and retail sale at one or more shops shall be auctioned. The vendors are the only importers of the drugs, and there are no wholesale dealers acting as middlemen between the cultivators and the farmers of retail vend. The farmers pay import and transport duties as above described. As a rule the farm of the drugs for a whole district is sold to a single vendor. The retail shops are usually fixed by the Collector. The total number of retail licenses has been very constant for some years, the average for the last ten years being 373. The number of shops, however, is larger, averaging 647 for the last ten years. The form of retail license contains no provision regarding consumption on the premises, nor regarding the persons to whom the drugs may be supplied. There is no fixed rule regarding "local option." In some districts it is attended to carefully. Any representation by the inhabitants would have full consideration, but representations relating to the location of shops are seldom received.

System of vend in Bombay.

628. The system of administration in Sind is in almost every respect the same as in Bombay, but there is some difference in the conditions. Neither ganja nor charas are produced, and the consumption of both is not large, though that of the latter

Sind.

is nearly, if not quite, equal to that of the former, and is said to be increasing. Ganja is imported from Panvel in Bombay, and charas from the Punjab. There is cultivation of hemp for bhang chiefly in Shikarpur and Karachi, averaging about 300 acres. The annual consumption of bhang is upwards of 4,000 maunds. There is a little smuggling of bhang from the Khairpur State, where it is grown and sold cheaper than in Sind.

Aden.

629. Aden is supplied with hemp drugs entirely from Bombay.

Berar.

630. The Abkari rules in Berar appear to rest upon the authority of a letter of the Government of India in the Financial Department, No. 3541, dated 10th October 1873. Berar is not British territory, and the rules constitute a special local law issued by the Governor-General in Council in virtue of specially acquired jurisdiction. Cultivation is prohibited except under license, and Rs. 10 per acre or part of an acre is levied on all cultivation. The area cultivated for production of ganja is confined to the Akola, Buldana, and Amraoti districts, and amounted in 1892-93 to 85 acres. The village officials are required to destroy any plants of spontaneous growth, and this growth appears to be kept under. Ganja is imported from Khandwa, and sometimes from Khandesh. About 1,300 maunds are consumed annually. Charas is not used. No information is given regarding bhang apart from ganja, and the bhang consumed is probably that produced locally in connection with the ganja cultivation. The monopoly of vend has been hitherto sold by auction to farmers together with that of opium. This is the only taxation besides the rate on cultivation. For the future separate drug shops are to be opened. The maximum amount for retail sale is 20 tolas for ganja and bhang and 5 tolas for charas. There is no limit for legal possession. There is nothing in the nature of local option, but objections to shops are considered. The average retail price of ganja is from Rs. 2 to 2-8 per sér.

Ajmere, Coorg, and Quetta-Pishin.

631. In these three small administrations Act XXII of 1881 is in force. There is a little cultivation in Ajmere, but none in Coorg or Quetta-Pishin. The contract system prevails, and the monopoly of vend is sold by auction or by tender. The amount realized is the only source of revenue. Shops are licensed, and the drugs are sold at the retailer's prices.

Summary of systems.

632. The following is a summary of the prominent features of the excise administration of the hemp drugs in the principal provinces (except Burma):—

Bengal.—Cultivation and manufacture of ganja controlled. Smuggling rare, except in Orissa. Ganja and charas highly taxed. Bhang little controlled.

Assam.—No cultivation of ganja permitted. Illicit cultivation rare. Some smuggling of an inferior kind of ganja from the hill tracts. Ganja highly taxed. Charas not used. Bhang little controlled.

North-Western Provinces.—Cultivation and manufacture not prohibited. Some ganja produced in the province. Supply of ganja

derived from Bengal, Central Provinces, Gwalior, and Bundelkhand. Little smuggling from Native States. Charas imported mainly from the Punjab. A little charas produced in Kumaon and Garhwal, and a small quantity imported from Nepal. Bengal ganja bears the tax imposed in that province. Other ganja and charas hardly taxed. Bhang not controlled.

Punjab.—Ganja not used. Charas imported from Central Asia not smuggled, but hardly taxed, there being no direct duty, of which, however, the imposition is under consideration. Bhang not controlled.

Central Provinces.—Cultivation and manufacture of ganja controlled. Smuggling from Native States and adjoining Bombay territory not wholly suppressed. Taxation of ganja fairly high—of charas light. Local bhang controlled as ganja. Foreign bhang highly taxed.

Madras.—Cultivation and manufacture not controlled. Ganja produced to a considerable extent. Taxation very light, there being no direct duty, and licenses being very few. Charas not used. Bhang little known. Few statistics available.

Bombay.—Cultivation and manufacture not controlled. Ganja produced to a considerable extent. Amount imported uncertain. Taxation light, there being no direct duty beyond import duty of 8 annas per maund. Charas hardly used, except in Sind. Bhang little known.

Berar.—Cultivation and manufacture controlled. Production of ganja not large, but imports from Khandwa considerable. Taxation light, there being no direct duty beyond a tax on cultivation of Rs. 10 per acre or part of an acre.

CHAPTER XVI.

PROVINCIAL SYSTEMS EXAMINED.

Scope of this Chapter.

633. In Chapter XIV the Commission dealt with the general policy which, in their opinion, should regulate the excise administration in respect of hemp drugs, and in Chapter XV they have described the systems at present existing in British India. They will now offer some remarks regarding the measures necessary to give effect to that policy, and will then proceed to examine the existing systems in the light of these remarks, adding their recommendations where change of any kind seems desirable.

Farm of monopoly of vend not sufficient.

634. The simplest method of dealing with the subject is to farm the monopoly of vend, leaving the lessee to make his own arrangements for a supply of the drugs and their sale to the public. This is the system (with some slight differences) which is in force in the North-Western Provinces, the Punjab, Madras, Bombay, and the minor administrations. It has the advantage of relieving the Government of all responsibility or interest in the matter beyond the disposal of the farms. It secures a preventive agency of a non-official kind for dealing with illicit sale and smuggling; and if proper care is taken to appoint respectable vendors to prevent combinations for the purpose of keeping down the price of the farms, and to license shops only when they are required by the local demand, such a system may appear to be successful and sufficient. But there are some serious objections to it. In the first place, it has the disadvantage of exercising no control over the production and consumption. Large profits do not depend upon the price being raised to the pitch necessary to check excess; they are as easily realised by large sales at low rates. Thus consumption may very probably be unduly stimulated. Secondly, the Government acquires no accurate information regarding the extent of the production, the sources of supply, and the increase or decrease of the habit of using the drugs. The Commission think it is the duty of the Government to acquire this information. Thirdly, the system leaves the whole revenue and consequent check on consumption at the mercy of competition, which is a very unsafe regulator. And, lastly, direct taxation has already been resorted to in some cases with good results, whereas in provinces where only the license system prevails control is insufficient and taxation inadequate.

Combination of direct duty with auction of licenses the best system.

635. In the opinion of the Commission, the combination of a fixed duty with license fees for the privilege of vend constitutes the best system of taxation for the hemp drugs. It is the system which prevails in regard to spirituous liquors produced in India, and is equally applicable to other intoxicants, in regard to which a policy of control and restriction is necessary. Unless there are special reasons to the contrary, the Commission think that the monopoly of vend should be auctioned. The special advantage of doing this lies in the fact that a method is thus secured of adjusting the total incidence of taxation to special circumstances, such as the local demand, the expense of carriage, the facilities for smuggling, the habits of the people, and the price of other intoxicants.

The danger of relying mainly on the auction system as a check on consumption is that a combination, or the absence of competition, among the vendors might at any time destroy its efficiency. The fixed duty should therefore be as high as possible, due regard being paid to the considerations mentioned in Chapter XIV, paragraph 586. When this is done, the auction of licenses for vend will come in as a valuable adjustment, and, if properly worked, will indicate whether the limit of taxation has been reached. If the proceeds of the auction sales of licenses have a decided tendency to increase, this will be an indication that the fixed duty will bear an increase.

Control of cultivation.

636. But besides that which results from adequate taxation, another method of restricting consumption is available to the Government in the limitation of the sources of supply. And the most effective way of doing this, at all events in the case of ganja, is to prohibit cultivation of the hemp plant, except under license, and to grant licenses for cultivation in such a way as to secure supervision and registration of the produce. Unless this is done, it is impossible to have any idea of the extent of consumption. The opinions formed from time to time in regard to this matter in provinces where cultivation is not controlled are mere guesses doomed to be falsified. It is of the greatest importance that this control should be exercised. In regard to charas, the only way of limiting the supply is by taxation, and the conditions of the trade are such that the supply can be completely regulated by the application of this method. Where the hemp plant grows spontaneously in abundance, the supply of bhang cannot be regulated, but in other places there is no reason why its cultivation should not be placed under the same restrictions as that of ganja, and a direct duty, which must be light in proportion to the facilities for importing the drug free of charge, imposed. The subject will be referred to again further on.

Limitation of shops.

637. Another most effective way of reducing the sources of supply is by keeping the number of licensed shops to the lowest limit compatible with meeting the real demand. The increase of shops or failure to reduce them has often been pointed out as an error committed by individual district officers whose aim was too much to raise revenue. The impropriety of this and its danger cannot be too strongly insisted upon. The matter is one which should be kept constantly in view by the Local Governments and by the Government of India.

Artificial checks not desirable.

638. The Commission do not, however, advocate any attempt to restrict the supply of the drugs by an artificial check, such as limiting cultivation of ganja or import of charas, with reference to an ascertained or computed average demand. It is not for the Government to determine how much of the drugs should be consumed. Its function is to exert pressure, but not to fix limits; to regulate the conditions, but not the actual quantity; and it is far better that, subject to those conditions, the laws of supply and demand should not be interfered with.

Prices of the drugs.

639. The incidence of taxation in different provinces ought not *cæteris paribus* to vary greatly. The following table shows the retail prices per sér prevailing in the different provinces:—

	Ganja.		Charas.		Bhang.	
	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bengal	12 0 0	30 0 0	35 0 0	40 0 0	1 0 0	6 0 0
Assam	15 0 0	40 0 0	...	...	...	...
North-Western Provinces.	2 8 0	30 0 0	7 8 0	40 0 0	0 4 0	1 0 0
Punjab... ...	...	...	4 0 0	15 0 0	0 2 0	0 8 0
Central Provinces	5 0 0	10 0 0	...	...	Not given	
Madras ...	1 4 0	4 2 8	...	...	0 6 8	3 5 4
Bombay ...	0 6 0	5 0 0	...	...	0 8 0	3 0 0
Sind... ...	6 6 0	10 0 0	15 0 0	30 0 0	1 0 0	1 4 0
Berar ..	2 0 0	2 8 0	...	...	0 8 0	0 8 0
Ajmere ...	4 0 0	5 0 0	16 0 0	20 0 3	0 8 0	1 0 0
Coorg... ...	0 14 0	1 0 0	...	...	Not given	
Quetta-Peshin ...	7 8 0	7 8 0	20 0 0	20 0 0	1 0 0	1 0 0

The figure given as the maximum for ganja in the Central Provinces is not the true maximum. It is "the average retail price in most districts for small quantities of ganja." The maximum must, therefore, be higher. In Jubbulpore, the Commission found that in some shops ganja was selling at Rs. 12 per sér. The maximum for the province is not available. A maximum quotation of 4 annas per tola, equal to Rs. 20 per sér, is given for Ganjam in Madras: this may be Rajshahi ganja. Bhang is said to reach a maximum price of Rs. 10 per sér in the same district. In Malabar, Vellore ganja is said to reach 4 annas per tola, but the maximum price in North Arcot is 4 pies. Wynaad ganja in the same district is said to reach a maximum price of 2 annas per tola. With these exceptions, no district shows a higher maximum price than that given in the statement.

It is evident that if the systematic treatment advocated by the Commission is to be applied, some means must be taken, especially in regard to ganja, of removing the extraordinary inequalities disclosed by this comparison. Up to year 1892-93, notwithstanding the high price of Rajshahi ganja, the cost of the daily average allowance of liquor to the habitual consumer in Bengal is, according to the memorandum, much higher than in the case of ganja. Judged by this test, there is room even in Bengal for increased taxation. *A fortiori* is this the case in other provinces except Assam. No doubt the quality of the drug varies in different provinces, but there is nothing in the analysis of the different kinds of ganja which points to such marked discrepancies in the price. And the general conclusion which must be drawn from these figures is that in all the provinces, except Bengal and Assam, taxation is totally inadequate to the due restriction of consumption. The same may be said of charas. As regards bhang, many witnesses are of opinion that there is no need to impose the same restrictions upon its consumption as

in the case of ganja and charas, and the difficulty of doing so in the Himalayan region is considerable. But the Commission concur with the majority of the witnesses in thinking that the same general principles apply, and that, so far as may be possible, this product of the hemp plant should be brought under more efficient control and taxation.

Ganja administration in Bengal.

640. A historical sketch of the ganja administration in Bengal from the year 1790 will be found as an appendix to the Excise Commissioner's Memorandum. From the first the object of the measures taken was "to check immoderate consumption and at the same time to augment the public revenue." Up to the year 1853 hemp drugs were taxed by means of a daily tax on their retail sale paid monthly. From 1824 to 1847 it was usual to farm out the excise revenue of entire districts. From 1853 the daily tax was abolished, and a duty of Re. 1 per sér was imposed. The retail vendor had to pay the full amount on a specified quantity in each month whether he took it all or not. In 1860-61 a fixed fee of Rs. 4 per mensem was levied for each ganja license, in addition to the duty at the prescribed rate, on all quantities passed to the shop for retail sale, the rule regarding the quantity to be taken by each shop being withdrawn. This was the beginning of the combined fixed duty and license fees system which at present exists. In 1876 the system of selling licenses by auction was introduced, and this has continued to the present time. The following table shows the operation of the action taken by the Bengal Government since the time when the auction of license fees was introduced :—

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Year	Area cultivated in acres.	Quantity of Ganja.			Revenue on all Ganja passed into consumption, except that exported to Assam and Kuch Behar.			Total taxation per sér average.	Number of retail licenses.	Population per retail license.	Rate of Duty			Remarks
		Exported to other Provinces and Native States.	Sold retail in the province	On which duty was realised.	Fixed duty.	License fees.	Total.				Chur.	Round.	Flat.	
		Mds	Mds	Mds.	Rs.	Rs.	Rs.	Rs A. P.			Rs. A P	Rs. A. P.	Rs A. P	
1876-77 ...	605	744	6,716	7,459	7,73,458	4,23,658	11,97,116	4 0 2	3,128	19,309	4 0 0	3 0 0	2 8 0	The rates of duty on ganja passed into consumption in the Orissa Division were fixed at a lower figure from the year 1882-83.
1877-78 ...	701	1,562	8,052	8,197	8,73,891	5,11,766	13,85,657	4 3 7	3,247	18,606	...	..	...	
1878-79 ...	482	568	5,115	5,468	8,04,291	5,41,436	13,45,727	6 2 6	3,244	18,629	4 0 0	4 0 0	3 8 0	
1879-80 ...	463	965	4,872	5,137	7,61,494	5,28,669	12,90,163	6 4 5	3,210	18,843	.	...	...	
1880-81 ...	745	948	5,338	5,600	8,28,117	6,26,557	14,54,674	6 7 11	3,411	19,337	...	...	...	
1881-82 ..	954	1,038	5,937	6,431	9,58,159	7,55,632	17,13,791	7 7 4	3,488	19,091	...	...	.	
1882-83 ..	664	1,043	5,223	5,646	10,65,274	7,95,223	18,60,497	8 1 3	3,271	20,358	5 0 0	5 0 0	4 8 0	Column 3 does not include exports by sea. The figures for such exports, which are only available for five years, are—
1883-84 ..	831	1,545	5,200	5,881	11,28,937	8,44,776	19,73,713	8 6 3	3,298	20,191	...	...	..	
1884-85 .	671	1,370	5,117	5,798	11,25,183	8,62,417	19,87,600	8 9 1	3,196	20,835	...	...	...	
1885-86 .	454	1,446	4,906	5,118	10,85,636	8,60,991	19,46,627	8 8 2	3,033	21,955	...		...	Mds.
1886-87 ...	730	1,678	5,342	6,264	11,85,033	8,90,646	20,75,679	8 4 6	3,046	21,862	...	...	...	1888-89 ... 536
1887-88 ...	593	1,673	5,679	6,550	13,09,126	9,35,894	22,45,020	8 2 3	2,949	22,619	6 8 0	6 4 0	4 8 0	1889-90 ... 526
1888-89 ...	811	1,779	5,415	6,413	13,66,289	9,52,064	23,18,353	9 0 7	2,922	22,828	...	...	...	1890-91 ... 423
1889-90 .	803	1,688	5,217	6,101	12,89,077	9,70,613	22,59,690	9 4 2	2,819	23,662	7 0 0	6 4 0	4 8 0	1891-92 ... 1,179
1890-91 ...	890	1,624	5,306	6,096	13,10,085	10,01,628	23,11,713	9 7 8	2,586	25,794	...	...	...	1892-93 ... 492
1891-92 ...	438	1,580	4,096	5,678	12,48,065	10,44,503	22,92,568	10 1 6	2,378	27,568	7 0 0	6 4 0	5 0 0	
1892-93 ...	1,180	1,310	4,711	5,451	12,80,631	11,05,435	23,86,066	10 15 1	2,672	26,673	...	...	...	
1893-94 ...	...	...	...	...	...	...	...	...	...	...	8 0 0	7 4 0	6 0 0	
1894-95 ...	...	...	...	...	...	...	...	...	...	...	8 0 0	7 8 0	7 4 0 6 0 0	

Results obtained.

641. This table shows that up to the year 1892-93 on five occasions some increase was made in the rate of fixed duty. The revenue steadily increased, until at the end of the period it was double as much as in 1876-77; notwithstanding this, the number of retail licenses after the first period of six years steadily diminished up to the year 1891-92, though in the following year there was an increase. The result is that the number of the population per retail license increased by 38 per cent. in the whole period. The increase in the total average taxation per sér of the taxed drug increased from Rs. 4-0-2 to Rs. 10-15-1. As regards the area cultivated (column 2), it has to be remembered that these figures represent the growth of the plant for consumption in Assam, the North-Western Provinces, and some Native States as well as Bengal. The figures in column 4 represent the ganja actually consumed in Bengal, which has decreased largely since the first two years, and since then has been nearly stationary.

In addition to the above facts, the evidence before the Commission tends to show that, except in Orissa, where the Garhjat ganja competes with the Rajshahi ganja, smuggling does not prevail in any part of the province; also that ganja is still the cheapest form of intoxicant, and that there is no evidence to lead to the belief that it is being displaced in Bengal by more noxious stimulants. The Bengal Government seems to have kept in view with the most successful results the principles which have been enunciated in Chapter XIV, paragraph 586, of this Report as essential to an efficient excise system, and to have intervened, when occasion demanded, to restrict the use of the Rajshahi ganja by administrative control and enhanced taxation The effect of the enhancements which have been made since the year 1892-93 cannot be gauged, but the Commission have no hesitation in saying that this part of the excise administration in Bengal is being most carefully and ably supervised.

Weak points in Bengal system

642. The weak points in the Bengal administration are—

(1) The defective arrangements for storage of the Rajshahi ganja.
(2) The smuggling into Orissa of the produce of the Tributary Mahals.

Storage.

643. The Bengal Excise rules provide that the cultivator must send into the public gola all the ganja he manufactures, and private golas are only permitted in the case of a cultivator who can satisfy the supervisor that he has a secure private place of his own. It has been shown above (paragraph 595) that there is no public gola for the storage of the crop, and that all the produce is stored in private golas. The opportunity for smuggling thus afforded has not escaped the notice of the authorities. In his report on the cultivation of and trade in ganja, 1877, Babu Hem Chunder Kerr (paragraph 131) dealt with the question, and recommended the absolute prohibition of private storage and the establishment of public godowns where the drug might be warehoused in bond. He was of opinion that six storehouses 125 feet × 20 feet, three of which should be at the sadar station of Naogaon and three at three outposts, would be sufficient to warehouse the crop. The Board of Revenue did not support the proposal, remarking that it would involve a very radical change in the existing system, and would also necessitate a very considerable expenditure on the part of Government in the construction of the necessary warehouses. The absence of any

evidence as to extensive smuggling was mentioned as obviating the necessity for the measure. In 1892 the Board were of opinion that the objections to public golas appeared to be insuperable. Mr. Lyall in his evidence says that the storage arrangements can be improved, but that under existing circumstances it would be impossible without enormous expenditure to have a public gola. Mr. Gupta, Excise Commissioner, says that the "difficulty of having a public warehouse is that the ganja stored in it would consist of numerous parcels, all belonging to different individuals, and this would lead to much confusion. Again, the drug has to be frequently aired, turned out, and handled in order to keep it in good condition, and it is next to impossible to secure this periodical examination when the ganja is stored in public golas situated at a distance from the houses of the cultivators." He therefore considers the scheme "impracticable," on which Mr. Lyall notes: "Rather, I would say, too costly." Mr. Price, Collector of Rajshahi, does not recommend public golas because Government servants would not take care of the ganja as the owners would. But he does not think there would be any great difficulty if there were several Government golas situated in central places, though he does not think the cultivators would view the change with favour. He concludes by saying that he sees no great objection to the plan; and adds: "You cannot have a perfect system without Government golas." Babu Hem Chunder Kerr retains his former opinion in favour of the system, which is also advocated by Ganendra Nath Pal, Sub-divisional Officer, Naogaon, and Abhilas Chandra Mukharji, Excise Inspector. The Commission have formed the opinion that the objections are not insuperable, and that the system of Government storehouses should be introduced. The example of the Central Provinces system seems to prove its practicability, and they are of opinion that it would have the effect of bringing about the speedy conclusion of bargains between the cultivator and the wholesale dealer, in which case the main difficulty would be removed. The expense of erecting several godowns should not, in their opinion, operate to prevent the measure considering the very large revenue at stake and the great desirability of removing the existing temptations to illicit dealing. The matter should, however, be left to the discretion of the Local Government.

Smuggling in Orissa

644. The smuggling of ganja from the Tributary States of Orissa into British territory has a long history, and more properly belongs to the general subject of excise administration in Native States, which will be dealt with further on.

Reduction of all ganja to chur.

645. The proposal of the Excise Commissioner to abolish flat and round ganja and have only chur is one that deserves notice. He explains rather more clearly in his evidence that what he advocates is not the compulsory production of chur, but the adoption of the chur rate of duty which is the highest for all ganja, which would result in the elimination of stick from the produce, and consequent reduction of the whole stock to chur. There are obvious advantages in having one rate of duty, but other considerations enter into this subject, such as the question as to the form in which the drug can best be packed and transported without deterioration. The experiments which are being conducted in connection with this question are still incomplete. The Commission feel that the matter is one for the Local Government to decide. It is mentioned here because

it would materially reduce the bulk of the produce and make the introduction of public golas more easy of accomplishment. The plan is also advocated by some subordinate Excise officers and Deputy Collectors.

646. The present system of ganja administration in the Central Provinces has been in force since 1882-83, previous to which there were several changes, which may be briefly recapitulated. In 1871-72, the first year during which Act X of 1871 was in force, the monopoly of vend of drugs (which included madak) was put up to auction for each district as a whole, or for smaller areas, and knocked down to the highest bidder. The contractors were free to make their own arrangements for obtaining the drug from cultivators, and cultivation was free. In 1873-74 the Local Administration had to consider complaints by the retail contractors to the effect that the extensive cultivation of ganja for home consumption by private individuals seriously interfered with their profits, and prevented them from paying to Government as high a revenue as they otherwise might. Meanwhile the Government of India had issued instructions to all Local Governments to discourage the consumption of ganja and bhang as far as possible by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as could be levied without inducing illicit practices. Accordingly, in April 1875, rules were introduced prohibiting cultivation except under license, for which the levy of an acreage fee was authorised, and embodying other provisions for inspection of stocks and licenses to cover the possession of the produce until its purchase by the licensed vendor. The acreage fee was fixed soon afterwards at Re. 1, and in 1876-77 a special penal fee of Rs. 10 per acre on unlicensed cultivation was introduced. These acreage fees were, however, pronounced illegal by the Judicial Commissioner in 1878, and new rules were framed providing for the storage of all ganja in Government godowns or in authorised private storehouses and for levy of duty on the drug when removed. The duty was fixed at Re. 1 per sér. Difficulties were experienced in working these rules, the cultivators not being able to dispose of their produce to the licensed vendors. The wholesale vendors held aloof, feeling uncertain of the effect which the enhanced duty might have on consumption, and the retail vendors would not purchase direct from the cultivators. The Local Administration accordingly purchased nearly the whole crop, amounting to some 6,856 maunds, at a cost of nearly Rs. 50,000. The Government of India, however, objected to the creation of a Government monopoly of ganja; so in 1880-81 the monopoly of wholesale vend for the province was granted to a single individual, who agreed to pay a duty of Rs. 2 per sér on all ganja sold by him to retail vendors, and to supply them with the drug at Rs. 3 per sér. It was contemplated in the agreement that the price might be raised by increments of 4 annas to Rs. 4 per sér, and the duty by increments of 3 annas to Rs. 2-12 per sér, within the year 1880-81. At the same time the system of auctioning the monopoly of retail vend by circles was done away with, and monthly licenses were issued at fixed rates, varying according to the size of the town or village, and without limit as to the number of licenses existing in one place. This system, however, was abandoned in the following year, and the auction system was again for the most part introduced. This was the origin of the system of monopoly of wholesale which exists to the present time in the Central Provinces. Since 1882-83, by which time Act XXII of 1881 had become law, the wholesale

Ganja administration in the Central Provinces.

monopolist has been called upon to pay a certain amount per sér in addition to the direct duty of Rs. 2 per sér, the rate varying in different districts and being generally determined by tender. Such tender is limited by the necessity of supplying retail vendors at Rs. 3 per sér to an amount per sér less than Re. 1. The object of this measure was to fix the difference between the duty on the drug, Rs. 2 per sér, and the price at which it was to be sold to retail vendors, Rs. 3, at a figure considerably in excess of the cost price of the drug, and to put up the gross profits thereby secured to the wholesale vendor to auction in the form of tender. It was thought that this would practically raise the direct duty in the districts where the cost price of the drug was least, and so equalize prices throughout the province. Cultivation in British territories has been concentrated, and since 1891 it has only been allowed in the Khandwa tahsil of the Nimar district.

Table showing the results of the ganja administration from 1882-83 to 1892-93.

647. During the changes above described there were great fluctuations in the area of cultivation, but the revenue steadily increased. The amount of consumption is not available. From 1882-83 the statistics are more complete, and the tabular statement subjoined will show the progress of the administration in regard to exports and consumption of ganja, the amount and rate of taxation, and the number of shops. Column 2 contains the figures as accurately as possible for the area cultivated, the table appended to the Excise Commissioner's memorandum gives the areas for which licenses were taken out, which were generally in excess of the area actually cultivated. Column 5, showing the fixed duty, represents the Rs 2 per sér duty levied on all ganja issued to the retail vendors of the province. Column 6 represents retail license fees, and the amounts, called wholesale license fees, obtained in accordance with the tenders of wholesale vendors:—

1	2	3	4	5	6	7	8	9	10	11
Year	Area cultivated in acres	Quantity of Ganja. Exported	Quantity of Ganja. Sold (retail) in the province.	Fixed duty	License fees	Total	Total taxation per sér (Cols 4 and 7)	Rates of fixed duty	Number of retail licenses.	Population per retail license
		Mds	Mds	Rs	Rs	Rs	Rs A P	Rs		
1882 83	452	2,241	600	47 935	61,676	1 09 612	4 9 1	2	814	11,344
1883-84	834	5 551	757	50 664	68 141	1,27 905	4 3 6	2	851	10,651
1884 85 ...	1,166	4 790	845	66,123	94 491	1,60,614	4 12 0	2	921	10,026
1885-86 ...	1,659	13,380	1,005	77,508	1 13 272	1,90,780	4 11 11	2	956	9,659
1886-87 ..	928	6,052	864	69,173	1 40,859	2,10,332	6 1 4	2	1,026	9 000
1887-88	544	4,227	831	65,244	1,23 350	1,88,594	5 10 9	2	1,026	9,000
1888-89 ...	915	5 052	941	74,191	1,24 054	1,98 244	5 3 10	2	1,081	8 543
1889 90 ..	954	7,933	971	74,836	1,25,770	2,00,606	5 2 8	2	1,078	8,566
1890 91 ..	477	4 108	1,019	78,205	1,32,709	2,10,914	5 2 10	2	1,081	8,596
1891-92 ...	963	3,916	1,156	88,613	1 38,875	2,27,488	4 14 10	2	1,053	8,951
1892-93 ...	984	4,232	1,194	91,629	1,61,141	2,52,770	5 4 8	2	1,047	9,558

Review of Central Provinces system.

648. It will be seen from this statement that the fixed duty of Rs. 2 per sér has not been raised since 1882-83. As above remarked, an increase was contemplated as far back as 1880-81. In 1887 the Local Administration declined to raise the duty, the principal reason assigned being that the effect would be to lower the bids for retail vend monopolies. The total taxation per sér of consumption has slightly decreased

since 1887-88. The local consumption shows a tendency to increase. The number of shops per head of population has on the whole increased; and, although the revenue has increased, this is due partly to increased consumption, and partly to keener competition in the auction sales of licenses.

The basis of good administration has been laid, but progress has not been secured, and to this result it is essential that attention should now be directed.

Ganja exported to other provinces and Native States should pay duty.

649. One important defect of the system is that exported ganja is very lightly taxed. In regard to this subject, the Excise Commissioner in 1887 remarked: "The part played by the Khandwa store as an *entrepôt* for the supply of the ganja demand of those provinces (the Central Provinces) is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, Gwalior, Rutlam, Dhar, Jodhpur, Udaipur, Rewa, Panna, Baroda, and other States of less note; and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivators' stock. Between 6,000 and 7,000 maunds of ganja have on the average of the last four years been annually exported from Khandwa to other provinces and Native States." Since these words were written the permit and registration fees have been imposed, and all the exported ganja pays something before being removed for export. But besides a small fee for storage, Government licensed vendors exporting to the North-Western Provinces or other British provinces only pay Re 1 per maund by way of registration fees, and foreign purchasers only pay Rs. 2 per maund for permit and registration fees. An instance is here afforded of the necessity of the systematic treatment advocated in Chapter XIV, paragraphs 588 and 590. A large amount of ganja which leaves the Khandwa store is insufficiently taxed, and it is absolutely necessary that arrangements should be made both with British provinces and with Native States to ensure its being adequately taxed in future. Whether the duty should be levied at the place of production or at the place of consumption is a matter of detail: the main point is that it should be levied somewhere before it reaches the consumers.

Duty should be raised also on ganja consumed in the province.

650. The Commission cannot regard the possible falling off in retail license fees as any reason for refusing to raise the duty on the Khandwa ganja consumed in the province unless such a falling off produces other consequences detrimental to the Administration. Caution is always necessary in raising the duty lest it should lead to illicit practices, and the circumstances of the Central Provinces require special watchfulness in this respect. The difficulties in the way of increasing the duty owing to the much lower price of the drug beyond the borders of the province are brought out clearly in the Excise Commissioner's memorandum. But making all allowances for these difficulties and for the fact that the Khandwa ganja is inferior to that produced at Rajshahi, the Commission are of opinion that the rate might safely be raised.

The system of supplying ganja to retail vendors at a fixed price.

651. The question, however, is one which is intimately bound up with the whole system of monopoly existing in the Central Provinces, and this system demands close examination. It has arisen, as has been shown, from special circumstances. Its main features are

that Government interferes at the point where the ganja passes from the wholesale to the retail vendor to fix the price at Rs. 3 per sér, and that the monopoly of wholesale vend is given to a small and selected number of persons who tender for payment of duty at Rs. 2 per sér *plus* as much of the margin between Rs. 3 and Rs. 2 as can be got from them. There can be little doubt that, apart from the difficulties above referred to, the system itself may have operated against a rise in fixed duty. The interference in the natural operation of the laws of supply and demand has rendered it more difficult for the Government to gauge for itself the necessity for increasing the direct duty. And it may be remarked that, in spite of the fact that the direct duty has not been raised, the receipts from licensed fees have not very materially increased, and therefore, while Bengal has doubled its taxation on the ganja consumed, the Central Provinces taxation has remained stationary. The cause of this may partly be found in the different circumstances of the two provinces. Except in Orissa, the question of smuggling has been set at rest in Bengal. In the Central Provinces the arrangements with the Tributary States which were undertaken with this object have only just been completed, and it may have been considered advisable to postpone any increase in the duty until this should have been done. But even allowing for this, the Commission think there is reason for attributing to the different systems, at all events in part, the widely different results obtained.

Advantages claimed for the system.

652. The advantages claimed for the system are—

(*a*) that it enables the retail vendor to know what he is about, and makes him independent of combinations and caprice among the wholesale vendors. This would tend to induce him to bid more for his license:

(*b*) that it enables Government to secure part of the wholesale dealer's profits:

(*c*) that it tends to equalize the price to the consumer all over the province.

The first two of these are not in themselves of any great importance. The main object is to secure that the drug is adequately taxed; and if, as appears possible, the license fees instead of being raised are kept down by the present system, while obstacles are placed in the way of raising the fixed duty, the advantage is more than counterbalanced. And as regards the third, it may be observed that the check imposed upon the price of the drug by fixing the price to be paid for it by the retail dealer may very possibly keep the price to the consumer unduly low in some districts, while in others, where the opportunities for smuggling are greater, there is no adequate test of its suitability.

Disadvantages of the system.

653. The principal disadvantage of the system appears to be that it imposes upon the Government the responsibility of taking into consideration several factors the precise value of which it is difficult to estimate, and the effects of which are better gauged by the unimpeded competition arising from the auction of the privilege of retail sale. And it seems possible that the present system may operate to a certain extent in checking the cost of production and the profits of the cultivator. If these had free scope, they would probably tend to raise the price of the article. Moreover, the profits of the wholesale vendor as such are kept down to such a low figure that it is almost

certain that he recoups himself in many cases by taking out licenses for the retail vend. The system thus encourages a combination of interests which is not generally desirable. The subject is unfortunately not treated in the memorandum, but in Jubbulpore the Commission ascertained that out of 71 retail shops, 20 were held by the wholesale monopolist. The status of the latter is such as to give him practical command of the situation, and the inference is almost irresistible that he will make use of this power to acquire for himself some of the profits attaching to the retail business if dissatisfied with the profits of the wholesale business. Viewed in this light, the limitation of the price may be to a large extent inoperative.

Its abolition recommended.

654. Upon the whole it appears to the Commission that any attempt to regulate the price of ganja otherwise than by a combined system of fixed duty and auction vend of monopoly of retail sale in tracts differently circumstanced is a mistake. It amounts to an interference either too great or too little. A Government monopoly under which, through the agency of Government officers, the drug would be offered to the public at a maximum price would be a simple arrangement. This has been shown not to be the best system for ganja (Chapter XIV, paragraph 589). The alternative is to levy a duty which must be regulated according to experience, the maximum being determined by those general considerations which have been elsewhere explained, and leave the supply unhampered, except by such check as is afforded by the auction of monopoly of retail sale. The latter affords the necessary adjustment for disadvantages pertaining to different localities, such as unusual cost of carriage, facilities for smuggling, etc. If on account of such disadvantages the rate of duty needs to be reduced, there is nothing to prevent the adoption of special rates of duty for particular tracts.

In recommending an increase of duty, therefore, on Khandwa ganja, the Commission are prepared also to recommend that the rule under which ganja is supplied by wholesale to retail vendors at a fixed price should be abolished, and that wholesale vendors should not be required to pay fees for their licenses.

Storage of ganja and increase in number of wholesale vendors.

655. In one respect the Central Provinces system is more efficient than that of Bengal, *viz.*, the storage of the produce. No difficulty seems to have occurred in these provinces in bringing all the ganja to a central godown at Khandwa. This is probably because the establishment of the godown has obliged the cultivators to come to early terms with the wholesale dealers or their agents. Mr. Robertson, Deputy Commissioner of Nimar, says: "The agents buy up the ganja on their own account as a speculation frequently while the crop is standing. The whole outturn thus passes into the hands of about a dozen men, who are then able to run up the price at the Khandwa storehouse to all except the wholesale vendors, by whom they have been specially retained. The existence of the 'corner' in no way affects the vend of ganja, so far as this province is concerned. The wholesale vendors have to supply the retail vendors at Rs. 3 per sér, so that the latter, and through them the consumers, are not affected. But wholesale vendors from other provinces undoubtedly find it difficult to make purchases at Khandwa." The Commission think that a system which leads to the speedy disposal of the crop by the cultivators to the wholesale vendors is desirable, but the monopoly of wholesale vend seems to be in this province in too few hands, whereby combination against a rise of

duty is facilitated. Subject to the adoption of the measures advocated in paragraph 654, the Commission recommend that wholesale licenses should be more freely granted without charge as in other parts of India, the selection being carefully made by local officers according to requirement.

656. If the suggestions made in paragraphs 643, 649, 650, 654, and 655 of this chapter are accepted, the systems of Bengal and the Central Provinces will be practically assimilated. And apart from the fact that the system advocated appears to possess the greatest advantages, this result is in itself most desirable.

Assimilation of the Bengal and Central Provinces systems.

657. The statistics for the North-Western Provinces are regarded by the Excise Commissioner as very defective so far as regards the amount of imports and exports. In the absence of any fixed duty, and with a revenue determined solely by the license fees, no provincial record of the traffic has been kept up. Mr. Stoker is not confident that allowance has been made for transfers from district to district, and he thinks there is much risk that the same drugs may have been counted twice, and the provincial total thus exaggerated. Moreover, licenses for the sale of the different kinds of drugs have not been sold separately. All that can be gathered from the statements furnished is that the total amount of the license fees has increased by about 75 per cent. in the last 20 years and the number of retail licenses by 50 per cent., and that the imports and consumption of ganja seem to be on the increase. The excise ganja of Bengal is being displaced by the drug from the Central Provinces and Native States, which is almost wholly untaxed, and this is one of the weak points in the North-Western Provinces administration as pointed out in Chapter XV, paragraph 609. The total revenue from license fees is in 1892-93 Rs. 7,04,788, but from this would have to be deducted the amount due to licenses for the sale of charas and bhang which cannot be ascertained At a rough guess, it may be put at one-third, leaving Rs. 4,70,000 due to ganja. To this must be added the duty on Bengal ganja levied in Bengal (about Rs. 1,12,600) and the registration fees at Re. 1 per maund levied on Central Provinces ganja at Khandwa, making a total of about Rs. 6,00,000, or Rs. 3-2-3 per ser on all imported ganja reckoned on an average of 4,774 maunds. On the whole this does not appear to be a very inadequate incidence of taxation, but it must be remembered that there is no control of production in the province, and that the taxation on the different kinds of ganja imported is very unequal. The number of shops is very large, nearly double in proportion to population of that which is found in Bengal. There can be no doubt that in this province more control is necessary, and some measures are urgently required for reducing the taxation of the different kinds of ganja which are brought into the province to some kind of uniformity. The need of remodelling the system has been fully recognised by the officers in charge of the excise; and the proposals of the Excise Commissioner, which have the support of the Member of the Board of Revenue in charge of Excise, include the following measures :—

North-Western Provinces.

(1) Prohibition of cultivation except under license.

(2) Prohibition of manufacture of ganja.

(3) Establishment of bonded warehouses, with control of storage and issue of ganja.

It is also proposed to control the import of ganja, and to impose an import duty at first of Rs. 50 to Rs. 80 per maund on *pathar* ganja from the Central Provinces and Native States, to be increased by degrees. For this purpose an amendment in the law will be required. Subject to the remarks which will be found further on (paragraph 679), the Commission agree in these proposals.

Madras and Bombay.

658. In Madras and Bombay the general opinion among local officers appears to prevail that no changes are necessary, though the Commission have reason to believe that these Governments recognise the impossibility of continuing the present state of affairs in view of general considerations affecting the whole of India. A seizure of 14 maunds 24 sérs of Madras ganja imported by sea to Calcutta was made in January 1894. When the Madras Collector of Customs was communicated with and asked to enquire full particulars and take action if he considered it necessary, he replied to the Calcutta authorities asking under what law he was desired to interfere. The Madras Act contains full provisions regarding the import and export of drugs; but these provisions have not been extended to the province. In view of the illicit imports into Burma from Madras, regarding which there is ample evidence from the former province, of the complaints from Mysore which are mentioned in Chapter XVII, and of the cheapness of the drug, there can be no doubt that reforms are urgently required. The system in Bombay is somewhat more formulated, but in view of the large amount of ganja produced, and the still lower price of the drug in the producing districts, there is no less need of an improvement in the system of administration. The annexed table gives a comparative view of the cultivation and taxation of ganja in these provinces, and in Bengal and the Central Provinces. The only comparison which can be made is that of total taxation per acre of reported cultivation, because the areas of cultivation and totals of taxation are the only figures on which any reliance can be placed in these two presidencies :—

1	2	3	4	5	6	7	8	9
			Average Taxation for ten years.					
Province.	Average area under cultivation in acres (10 years).	Whether cultivation is restricted or not.	By fixed duty	By license fees.	Total.	Average revenue per acre of cultivation.	Average retail price per sér.	Remarks.
			Rs.	Rs.	Rs.	Rs.	Rs. A. P	
Bengal	740	Yes	13,75,837	10,85,292	24,61,129	3,326	20 0 0	
Central Provinces ...	900	Yes	74,549	1,22,266	1,96,815	210	5 0 0 to 10 0 0	
Madras	350*	No	*Nil*	47,292†	47,292†	135	1 10 8	* 1893-94 probably underestimated. † 1892-93 only.
Bombay ...	1,152‡	No	Not given	Not given	1,22,987‡	107	0 6 0 to 5 0 0	‡ 8 years only.

Compared with Bengal and the Central Provinces.

659. The Bengal figure in columns 4, 5 and 6 represents nearly the whole of the revenue levied on all the ganja produced on the area given in column 2, as the Assam and Kuch Behar duties, which are not levied in Bengal, have been added.

The only item which cannot be added is that portion of the North-Western Provinces license fees which is due to the sale in those provinces of Bengal ganja. If this is calculated according to the proportionate amount of such ganja, it would not materially affect the calculation. If a similar calculation is made to determine the amount of the license fees due to the sale of Khandwa ganja in the North-Western Provinces, about Rs. 1,57,000 would have to be added to columns 5 and 6 of the Central Provinces figures, and the result of this will be to raise the average revenue per acre of cultivation in column 7 from Rs 219 to Rs 393. Some of the Khandwa ganja also finds its way into Bombay and Berar and other tracts, and pays duty there in the form of license fees, so the average per acre of Rs. 393 is still under the mark, but in any case the taxation thus calculated is very much less than in Bengal.

On the other hand, the average revenue per acre for Madras and Bombay is probably over the mark, as the amounts in column 6 represent the license fees paid for all the hemp drugs and not ganja only; and in the sales effected under these licenses is included a certain amount of ganja, at all events in Bombay, imported from other provinces Against this, however, must be set the fact that both the presidencies export ganja,—in Madras to the extent of about one-seventh of the total produce, and in Bombay to the extent of more than one-half. But as the bulk of these exports goes to Native States, or is exported by sea, no revenue is realized therefrom, and the figures of column 7 are therefore on the whole probably in excess of the true figures. The general conclusion is that as compared with Bengal, or even with the Central Provinces, the taxation of the ganja produced in Madras and Bombay is very light.

660 In the Madras Presidency various proposals have been made from time to time for introducing some control into the excise administration in respect of hemp drugs. In 1886 a circular was issued to all Collectors by the Commissioner of Salt and Abkari calling for information as to the extent and nature of the trade in these drugs. In this circular it was suggested that for the present it would probably suffice (*a*) to forbid cultivation except under license, which should be granted free of payment, (*b*) to prohibit manufacture except under license, (*c*) to sell the monopoly of manufacture and vend by districts or taluks as might appear best, licenses for manufacture and retail vend being granted at the Collector's discretion in such number as might appear requisite as in the case of the opium farms. Most of the officers consulted recommended the adoption of these proposals The Board of Revenue, although they considered that the information collected showed that the consumption of intoxicating drugs was very limited, remarked that it was clearly the intention of the legislature that cultivation should be licensed, and they made the following proposals to Government —

History of the subject in Madras

(*a*) to prohibit cultivation except under license to be granted free;

(*b*) to restrict possession by persons other than licensed wholesale and retail vendors;

(*c*) to grant free licenses to wholesale dealers;

(*d*) to put up to auction licenses for retail sale; and

(*e*) to impose a pass duty.

In view, however, of the indefinite and uncertain information obtained regarding the extent of the traffic in the drug and the limited nature of the consumption, the Madras Government came to the conclusion that in most parts of the Presidency no restriction was called for, but remarked that it was prepared to extend the provisions of the Abkari Act relating to intoxicating drugs to limited areas on adequate cause being shown.

Experience, however, showed that the demand for the drugs was considerably larger than was suspected, and that the competition in certain districts for the privilege of vend was very keen. Accordingly the licenses for retail vend were sold by auction, with the result that the revenue from this source rose the first year from Rs. 8,805 to Rs. 54,989. No further measures for controlling cultivation or restricting consumption were taken. The Board again considered the question of limiting the legal possession of the drug, which had been advocated by the majority of the Collectors, but came to the decision that restrictions on the cultivation of the plant should precede those on possession, and their objections to revising the idea of licensing cultivation appear to have been (*a*) that this would involve the taking out of a license by every person who had a plant or two in his garden; and (*b*) that it would have been necessary to make a large increase in the number of shops in order to meet the legitimate demands of consumers. It is not clear why the Board changed their views regarding prohibition of cultivation which they had previously recommended. And the number of shops existing in Madras is under the existing arrangement manifestly inadequate, being one for every 144,781 of the inhabitants. Considering that the consumption of the drugs in Madras is found to be much larger than was suspected, and that the propriety of introducing more control into the administration has for several years been recognized, the Commission are of opinion that the needed reforms should be no longer delayed.

Treatment of the subject in Bombay.

661. The system in Bombay, which was introduced in 1880, does not seem to have been brought under discussion since that time. The Commissioner of Excise states that the subject attracted little attention till the Commission was appointed. The Commissioner of the Northern Division says that the system seems to have grown up in a haphazard way. The subject has been treated mainly from the revenue point of view, and the control exercised has not been strict. At the same time the area of regular ganja cultivation in Bombay seems to be considerably larger than in any other province; and if measures with a view to restriction in consumption are necessary anywhere, they certainly appear to be so in this Presidency.

Control of cultivation for ganja.

662. The Commission on a full review of the whole circumstances connected with the ganja administration have framed the opinion that cultivation of the hemp plant for the production of narcotics in Madras and Bombay should be prohibited except under license, and that the licensed cultivators should be restricted to a limited area as in Bengal and the Central Provinces. They are of opinion that no greater difficulties exist in this respect than have been already overcome in these provinces. A few remarks are offered in justification of this view.

663. *First.*—In Madras and Bombay, as was formerly the case in Bengal and the Central Provinces, the regular cultivation is already confined to limited areas. There is practically scarcely any regular field cultivation of ganja except in the Kistna and North Arcot districts of Madras and the Ahmednagar and Satara districts of Bombay; and the prohibition of cultivation in other districts will involve no serious difficulty. And though the ultimate inclusion of all the ganja cultivation in an area more circumscribed than that of two whole districts is desirable and probably feasible, still the limitation even thus far would be a considerable step in the right direction.

Restriction of area of cultivation.

664. *Secondly.*—If it be objected that the prohibition of occasional cultivation of a few plants in the private gardens or enclosures of individuals will be difficult to enforce, to this the Commission would reply—

Objection as regards private cultivation.

(1) This difficulty has been overcome in Bengal, Assam, and the Central Provinces, in parts of which, as abundantly established by the evidence taken by the Commission, this sporadic cultivation was equally prevalent.

(2) The difficulty is not so great as it seems; for whereas at first sight it seems that it would be necessary in order to enforce the prohibition to increase establishments and exercise vexatious interference with the people, such has not been found from experience gained in other provinces to be actually the case. The difficulty of concealing the plant and the evidence of illegality involved in the mere existence of a prohibited plant in occupied lands, coupled with a legal prohibition, has in fact sufficed almost to exterminate such growth in tracts where ganja is produced with a minimum of prosecutions and penalties.

665. *Thirdly.*—If it be objected that the wild hemp plant growing in unoccupied lands is so plentiful that, even if the prohibition against cultivation is successful, ample opportunity will still be found to bring a large amount of ganja into the market from this source, to this the Commission reply—

Objection as regards wild growth in Madras and Bombay.

(1) That the ganja derived from such spontaneous growth, untended and unimproved, is so inferior as to obviate all likelihood of its competing with the cultivated ganja.

(2) That wild hemp in the strict sense is not found in tracts removed from human habitations, past or present; and the amount of ganja capable of being smoked which can be procured from such growth will not interfere with the success of the proposal.

666. *Fourthly.*—If it be objected that the ganja produced in Native States adjoining the Madras and Bombay Presidencies cannot be kept out of the province, and that this fact alone vitiates the scheme, to this the Commission reply—

Objection as regards Native States.

(1) That even if this be so, the same may be said of the provinces where cultivation is controlled; and while the arrangements of these

provinces are, no doubt, affected by the proximity of Native States, they are nevertheless sufficiently successful for practical purposes.

(2) That there is nothing to prevent the Government from entering into negotiations with the States (as has been done in the case of the Central Provinces, apparently with marked success) for mutual co-operation in the interests of the excise revenue, and the Commission (*vide* Chapter XVII) are prepared to recommend that this should be done.

Evidence relating to control of cultivation in Madras.

667. It will be desirable to analyse the evidence on this point in both presidencies. Several witnesses in Madras speak of the needlessness of controlling cultivation, but on this point it cannot be expected that they should take a sufficiently wide view, as the interests at stake are larger than those of individual districts. The only witnesses who consider the measure impossible are—Mr. Sewell, Collector; Mr. Mounsey, Collector; Mr. Willock, Collector (as regards the Agency tracts); and Mr. Taylor, Manager, Jeypore Estate (as regards the Agency tracts); two Deputy Collectors; and a Missionary.

On the other hand, there is a much larger consensus of opinion that control is feasible. The Hon'ble Mr. Crole, Member of the Board of Revenue, in charge of Excise, says: "If you were to order the stoppage of cultivation of hemp or even rice, it would be done. There would be no difficulty in having the order carried out. The people would stop the cultivation: they are quite amenable. It would be stopped without the necessity of espionage and interference, but there would always be the risk of false charges." Mr. Merriman, Deputy Commissioner of Salt and Abkari, says: "There is a good deal of backyard cultivation which is untaxed. It would be desirable to stop the sporadic cultivation if feasible. I think we could do this. I think it would be far simpler to issue an order stopping cultivation, and that would be far easier than attempting to tax it. I believe this cultivation could be stamped out by the mere issue of the order; and, supposing that there were reasonable facilities for consumers obtaining the drugs, the dissatisfaction would not be great." Mr. Benson, Deputy Director of Agriculture, says that "prohibition of cultivation would not harass the people, as those affected would be so few; and it would, I think, within a short time accomplish its object." Mr. Levy, Acting Deputy Commissioner, Salt and Abkari, thinks "the cultivation of the hemp plant, and the manufacture and possession of the drugs therefrom, should be brought under thorough control." Mr. Bradley, Collector, thinks that, except in the Wynaad, prohibition of cultivation would be possible in Malabar, and could "be generally carried out without much interference with the people, but would be hardly possible in the jungly parts." He thinks that for ordinary tracts the present abkari staff might be sufficient to secure compliance with the order, though he does not guarantee this.

Other advocates for the control of cultivation are—Five Deputy Collectors, one of whom, Mr. Azizuddeen Sahib Bati, in North Arcot, says that a prohibitive order would have the effect of stopping cultivation without any great interference; two Deputy Conservators of Forests, three Tahsildars or Acting Tahsildars,

the Hon'ble Rai Bahadur Sabapathy Mudeliar, Raja K. C. Manavedan, three pleaders, five missionaries, and four others, *viz.*, a municipal chairman, a zamindari manager, a cashier, and a sarishtadar.

Bombay.

668. In Bombay, though several witnesses say that further control is unnecessary, three of whom are under the impression that licenses are already required for cultivation, there is no opinion adverse to its restriction on other grounds. The following officers see no serious objection to restriction of cultivation:—Mr. Vidal, Chief Secretary to Government; Mr. Reid, Commissioner; Mr. Campbell, C.I.E.; Collector; and Mr. Ebden, Collector of Ahmednagar.

Mr. Monteath, Collector, though he thinks there is no need for controlling cultivation, is of opinion that the time has come for putting the drugs on the same footing as alcohol and opium. Three Deputy Collectors are in favour of control; also two mamlatdars, an inamdar, a forest officer, and a drug farmer.

From this analysis of the evidence it seems clear that no great difficulty need be anticipated in bringing the cultivation of ganja generally under control. There are tracts, no doubt, where measures would have to be taken by degrees and with caution; but the inclusion of these at the outset in a system of control is not essential.

Supervision of the manufacture and storage of the crop required with a view to imposition of duty.

669. The Commission are further of opinion that control and limitation of cultivation must be accompanied with such supervision of the manufacture and storage of the crop as is necessary to the imposition of a fixed duty on ganja in addition to the fees for licensed vend which are at present levied. In regard to both these matters, the experience of Bengal and the Central Provinces is available, though the systems differ at present as to storage.

Levy of duty in Madras and Bombay.

670. That there is room for the imposition of a duty on ganja in both presidencies can hardly be doubted. In Madras, though there are several officers of standing who are satisfied with the present arrangement, there is no protest against increasing the duty, while a few witnesses are in favour of increasing the price of the drugs. Mr. Willock, Collector, says: "I am not opposed to an increase of the price of the drug where practicable." Mr. Bradley, Collector, says: "At present I do not think hemp drugs are sufficiently taxed with reference to alcohol." Other advocates of increased taxation are: a District Surgeon, a District Forest Officer, a Deputy Tahsildar, two medical practitioners, a jagirdar, a pleader, a merchant, a newspaper editor, bank cashier, and three missionaries. In Bombay there is also a good deal of evidence as to the needlessness of further interference on taxation; but there is at the same time weighty evidence in favour of increased taxation. Mr. Mackenzie says: "I think the taxation of the hemp drugs in this Presidency might be raised; but the question would require details and careful examination. The ganja of this Presidency is roughly manufactured, though the cultivation is careful enough. A direct tax would necessitate the adoption of a system of distinct wholesale vend. I see no objections to that, as the tax does not fall on the cultivator. The variations in the retail price shown in paragraph 8 of my memorandum are, no doubt, excessive, and seem to

indicate that there is room for taxation to regulate the wholesale rates of the drug." Mr. Vidal says: "In view of the higher taxation in other provinces, I see no reason why there should not be a higher direct tax in this province. The disproportion between the taxation of liquor and of hemp drugs, and the relative dearness of liquor which results from this, also points to the propriety of increasing taxation on hemp drugs." Mr. Monteath, Collector, says: "I think the present system of excise administration in respect of hemp drugs has worked fairly well, but that the time has come for putting these drugs on the same footing as alcoholic stimulants and opium. Hitherto the consumption of preparations of hemp has not been extensive, and so long as it was very small, the farm of the right to sell, as dispensing with the need of any preventive establishment, was perhaps more suitable. But it seems that not only in this district (Bijapur), but throughout the Presidency, the amounts bid for the right to sell have been increasing, and it may fairly be inferred that the habit of consuming these drugs is spreading. It cannot, indeed, be said yet to be prevalent; still the total consumption is, I think, sufficient to make it worth while to impose an excise duty; it is already in this district much in excess of the consumption of opium, though insignificant as compared with the consumption of alcoholic stimulants, particularly toddy. It is, I believe, generally admitted that the system of deriving a revenue by farming the right to sell is suitable only in the earliest stage, and that the levy of an excise duty is the fairest and most satisfactory method of taxing an article produced in the country. Now the levy of an excise duty on preparations of hemp will present no difficulties in this Presidency. The existing abkari establishments would probably suffice for the levy of the duty, or at least would require strengthening to but a small extent. The levy of an excise duty would not, I think, excite any opposition. An alteration in the form of duty could not reasonably be objected to." Mr. Ebden, Collector, says: "The hemp drugs are very much cheaper than liquor now. For a pice a man can get enough ganja to last him for a week if he is a moderate consumer. There is, therefore, considerable margin for heavier taxation of the drug without driving the people to liquor or other intoxicants. I consider there is a considerable margin for taxation, though the drug is consumed by the very poor. I have no sympathy with the excessive consumer, and the moderate consumer would not feel a moderate increase." Mr. Sinclair, Collector, says: "I consider there is a margin for increasing taxation, having regard to the price of other intoxicants, the fact that the drugs are mainly used by the poor, and the danger of smuggling." Mr. Almon, Assistant Collector, Bombay, says: "My impression is that the tax on the drugs is too low. I think that the ordinary liquor consumer pays twice as much for what he wants as the ordinary ganja consumer would, or three times as much as the ordinary bhang drinker. I think the rates should be equalized." Other advocates of increased taxation are three Deputy Collectors, the Administrator of the Jath State, an Assistant to the Commissioner, an inamdar, a mamlatdar, a pleader, and a drug farmer.

Recommendations regarding taxation of ganja in Madras and Bombay.

671. In view of these opinions, as well as of the general considerations which have been explained above, the Commission have no hesitation in advocating the gradual assimilation of the Madras and Bombay systems to that in force in Bengal. The process of arriving at adequate taxation must necessarily be gradual, but a commencement should be made without any further delay.

The present is the time for this measure, while consumption of ganja is still believed by the authorities to be very limited. It cannot but be the case that the enormous difference between the taxation of liquor and ganja is an incentive to the increase in the drug habit, and such an inconsistency between the arrangements of different provinces and the administration of the excise on different kinds of intoxicants cannot, in their opinion, be any longer maintained.

672. In Berar the foundation has already been laid for the introduction of a system of control in respect of ganja similar to that advocated by the Commission. Cultivation is already restricted and an acreage duty imposed on its growth. The Commission are not aware of the conditions under which this has been found possible. The law of the province stands on a special footing, as previously explained. The Commission believe that there will be no difficulty, and there certainly will be some advantage in assimilating the system to that which exists in the Central Provinces, and which may ultimately be adopted in Bombay. Ganja is inadequately taxed, and it is unlikely that the pitch of taxation necessary to restrict the consumption can be reached otherwise than by a direct duty, or that a much heavier acreage duty will effect the desired object.

Berar.

673. Not much need be said of the other minor administrations. Progress in Ajmere must depend upon co-operation with the British system in surrounding States. Ultimately it is probable that the system can be assimilated to that in force in the rest of British India. In Coorg the price of ganja is very low owing to the facility of obtaining a supply from the Madras Presidency. When the system of the latter is revised, care should be taken that similar restrictions in Coorg are not wanting. Quetta-Peshin hardly requires special notice. The consumption of ganja must be very small, if it exists at all, as the sources of supply are very distant. The retail price stated to prevail is higher than anywhere else in India except Bengal and Assam.

Ajmere, Coorg, and Quetta-Peshin.

674. As the only province which receives large imports of charas, the Punjab is primarily concerned with the administration of this drug. Hitherto there has been no taxation of charas in the Punjab beyond the levy of license fees for its vend. It is not used in Assam, Madras, Berar, and Coorg, and but little in Bengal, the Central Provinces, and Bombay. It is used in the Punjab, the North-Western Provinces, Sind, and Quetta-Peshin. Bengal levies a duty of Rs. 8 per sér on the small amount imported, and the Central Provinces Rs. 10 per maund. In Bengal, Mr. Gupta says that it will be necessary ere long to raise the duty. The import duty in Bombay is 8 annas per maund. In the other provinces the only tax is, as in the Punjab, that which is represented by the license fees for vend. Bengal is, therefore, the only province where the taxation is adequate. In the North-Western Provinces it is proposed to levy a duty of Rs. 80 to Rs. 100 per maund on all charas imported. In the Punjab, in pursuance of the provisions of Act X of 1893, a duty of Rs. 20 per maund has been proposed. This appears very small. The conditions under which the trade in charas from Yarkand is carried on operate to some extent against more severe taxation. But if provision is made to prevent the tax from being demanded from the actual importers, the Commission are of opinion that there is ample room for taxation without the trade

Taxation of charas.

being seriously affected. There is a large amount of responsible evidence for taxing the drug in the Punjab and the North-Western Provinces, where the consumption is far greater than elsewhere, and the Commission think that Rs. 80 per maund is not too high to begin with. Ultimately, regard being had to the consideration above noted, the taxation might be raised considerably.

675. As the supply of charas is so completely within the control of Government, it is not necessary to say much regarding its disposal. The establishment of bonded warehouses, to which the drug can be taken on arrival, and from which it shall be issued only on payment of duty by the licensed vendors, has already been decided upon in the Punjab. This measure will relieve the importers from having to pay the tax in anticipation of sales, and consignments from these warehouses will be sent under pass to the different centres of consumption. The Commission do not think it necessary that the whole duty leviable under provincial arrangement should be demanded when these consignments are removed. The bonded warehouse system may be again resorted to by Local Governments which desire to impose further taxation locally. But as from time to time the Punjab Government will, no doubt, find it possible, with reference to political considerations, to enhance the duty, it will be desirable that there should from the first be an understanding as to the relative claims of the importing province and the consuming province to the duty realized. A similar question has arisen regarding the Rajshahi ganja exported to other provinces, and the procedure has not been uniform. This is one of the cases in which the intervention of the Supreme Government is needed for the settlement of inter-provincial arrangements and of arrangements between British provinces and Native States. It may be necessary to amend the Act in order to carry out the above suggestions. For although section 23-A of the Act provides for the imposition of duty on the imported drug without specifying where it should be paid, section 36 (*d*) lays down that the bringing of it into British India without payment of the prescribed duty is an offence. The matter is under the consideration of the Local Government. It is essential that arrangements should be made for taxing charas not at the frontier, but at the bonded warehouses.

Transport of charas and inter-provincial arrangements.

676. The difficulty of controlling bhang in Bengal, Assam, the North-Western Provinces, and the Punjab arises from the fact that there is large spontaneous growth in the mountainous and submontane tracts of these provinces. There is undoubtedly a belt of growth which precludes strict control. But in parts of these provinces away from the hills there is little or no spontaneous growth, and in these parts as well as in the other provinces control is possible. There is a little cultivation in the Punjab and the North-Western Provinces, and considerably more in proportion in Sind. None of this cultivation is in the Himalayan region, where the wild growth exists. With the exception of Bengal and the Central Provinces, the only taxation is that realised by auction vend of the monopoly of sale. In Bengal a duty of 8 annas a sér is levied on all bhang brought to the storehouses under Government supervision, which represents but a small fraction of what is illicitly consumed. Without controlling the spontaneous growth of the plant, it has been found impossible to raise the duty, though the subject was fully considered in 1889-90. In the Central Provinces a duty of Rs. 2 per sér is levied on foreign

Control of bhang.

bhang, which operates to prevent the imports from passing a very limited figure. The taxation of this bhang is excessive, and its sale is affected by the fact that only the wholesale dealers are allowed to sell it by retail.

Recommendations for its control and taxation.

677. The Commission are in favour of taking such measures as are possible for controlling and taxing bhang. For the present they consider that in the belt of growth above referred to nothing more can be done than to auction the monopoly of retail vend. In other parts they are of opinion that cultivation should be prohibited, except under licenses, and arrangements made for the transfer of the whole crop produced from licensed cultivation to the authorised vendors. In these tracts they are of opinion that some attempt may be made to extirpate the spontaneous growth by rendering the occupiers of land responsible that it shall not be found on their lands. Legislation may be necessary for the purpose. They would like to see Mr. Westmacott's circular which was cancelled by the Bengal Government revived, and they would suggest a modification of the Assam circular permitting the use of green or dry hemp for the use of cattle. Now that the habitat of the spontaneous growth has been clearly defined, Local Governments will have no difficulty in deciding where, for the present at least, the existing system must be allowed to continue. The Commission think that it may be impossible to treat the bhang which is produced in ganja-growing tracts in a different manner from ganja. To do so would probably be to imperil the ganja administration. But if this opinion is found to be mistaken, they would be glad to see this bhang more leniently treated than ganja. The Commission find that in the Central Provinces bhang is only permitted to be sold by the wholesale vendors, and the duty is the same as in the case of ganja. The reason for this is not apparent. As judged by the standard of other provinces, the incidence of taxation is high compared to ganja.

Distribution of the hemp drugs to retail vendors.

678. As regards the distribution of the drugs to retail vendors, the Commission think that when adequate arrangements have been made for their taxation, not much interference is required. The evidence contains various suggestions on this subject. Some witnesses point to the large profits reaped by wholesale vendors, and suggest that these middlemen should be abolished, and that the functions discharged by them should be assumed by the Government in order that these profits may be secured for the public revenues. The Commission are not in favour of this proposal. It is open to some of the objections against a Government monopoly which have been previously stated. If the profits reaped by the wholesale vendors are found to be excessive, this fact would point to a rise in the duty. If the latter is sufficient, the Government need not concern itself with the dealers' profits. Private enterprise is, moreover, better suited for the distribution of the taxed drugs than Government agency. The aim of Government should be to dissociate itself, as far as possible, consistently with efficient control and adequate taxation from the supply of the drugs. This general policy may admit of special exceptions. The Bengal Government has made provision for such exceptions, while affirming the general principle, in the following rule* :—" Except in districts where minimum prices have been prescribed by the Board, no attempt should be made to regulate the price at which spirits, liquor,

* Bengal Excise Manual, page 105, Rule 14.

or drugs are supplied by the producer or wholesale dealer to the retail vendor, or by the retail vendor to the consumer." In the Central Provinces the price at which the wholesale vendor is to supply the drugs to the retail vendor has been fixed for all districts, and the subject has been already considered. This is not done elsewhere in British territory, and any deviation from the above-stated principle seems to the Commission to require special justification. The privilege of wholesale vend should not be too restricted. This will result in great variations of the prices paid by consumers owing to the absence of competition. In Assam the "effect of farming the monopoly of a whole district to a single person has been found to result in very high prices even where smuggling is known to exist," and this should be obviated if possible by freer competition in regard to the supply. If this fails, special arrangements may be required for keeping the price at a reasonable figure.

Import, export, and transport duties.

679. In some provinces import, export, and transport duties are levied; and this practice is not uncommon in Native States. This practice arises from the want of uniformity which exists in the systems of administration. It is attended with considerable difficulties, and serves no useful purpose in itself. If all the drugs were adequately taxed at the sources of supply, subject to such additional taxation as local circumstances demand, the amount of which is best determined by auctioning the licenses for vend, there would be no need for such duties at all. As a supplementary means of taxation, where these requirements are not fulfilled, it may be necessary in special cases to maintain them. This must be the case, at all events for some time to come, if drugs are imported from Native States into British territory. But, if possible, such imports should be entirely prohibited, unless the State concerned has assimilated its system to that in force in British territory. Transport duties from one place to another in British territory should be entirely abolished as soon as adequate taxation of the drugs at the source of supply has been provided for. A system of free passes to licensed persons is all that is needed. Partial measures of this kind tend to obscure the real issue, *viz.*, how far consumption needs to be checked by a rise in duty.

Retail vend.
(a) Separation of licenses for different kinds of drugs.

680. The system of retail vend differs largely in the different provinces. In some places the licenses for retail vend of the drugs are held by the same persons and under the same contract as licenses for the sale of opium without any attempt to discriminate the amount of fees due to each. More frequently the licenses cover the sale of all kinds of hemp drugs, and the relative demand for the different kinds is not ascertainable. Where the demand is small there may be reasons for maintaining the latter system, but the hemp drug licenses should, in the opinion of the Commission, be distinct from all others, and in most cases it is desirable that the licenses for the different kinds of hemp drugs should also be distinct; for it is not the desire of Government that a demand for any of the drugs should be created. Shop licenses should only be given where the demand exists, and there may be a demand for one kind and not for another. The demand for a bhang license, for instance, should not be responded to by licensing the sale of ganja or charas in addition, which may not be necessary. As a rule the licenses should be sold separately. As Mr. Stoker says: "This would enable us to provide for the sale of the more harmless

forms of the drugs without the others, and to meet the demand for one form without allowing the sale of the other forms of the drug."

(b) Separate sale of shops.

681. As to the question whether the licenses for different shops should be sold separately or collectively for any given tract, the Commission are not prepared to generalize. The latter system affords a better guarantee for the respectability of the licensee, and has the merit of simplicity. But where auction bids are affected by combinations, the separate system may be desirable. The matter is one that must be left to the discretion of Local Governments and Administrations.

(c) Grant of retail licenses to wholesale vendors.

682. The Commission are averse, as a rule, to the grant of retail licenses to wholesale vendors, and there is a good deal of evidence against the practice. It is not desirable to insist on the wholesale vendors becoming also the retail vendors, and diversity of practice tends to produce complications. If both functions reside in the same person, he has too extensive a monopoly, and will command the market to an undesirable extent. It cannot be too strongly insisted upon that uniformity and simplicity of system are essential to providing the means for ascertaining whether the drugs are sufficiently taxed; and when some of the shops are held by the wholesale vendors, and others by separate retail vendors, it is more difficult to gauge accurately the effect of the system. At the same time the Commission are aware that the practice of allowing wholesale vendors to hold retail licenses is very general, and they are unable to recommend that it should be authoritatively put a stop to. The subject is one which they would commend to the notice of Local Governments with reference to the above remarks.

(d) Licensing of shops.

683. A separate license should be granted for each shop. This is ordinarily the practice, but there are exceptions. None should be permitted. The District Officer should watch the auction bids and refuse to renew licenses if they only amount to a nominal figure. The principle should be to supply a real demand, not to create one; and if the demand only exists to a very limited extent, the danger of stimulating it must prevail against the convenience of the very limited number of consumers. The number of the population per retail license in the different provinces in 1892-93 was as follows:—

	Souls.
Bengal	23,560
Assam	19,975
North-Western Provinces	12,012
Punjab	12,869
Central Provinces	9,109
Madras	144,781
Bombay	43,528
Sind	4,478
Berar	6,061
Ajmere	30,130
Coorg	28,842

The number of shops in Madras is only 246, and the allegation of some of the witnesses that there is no need for shops because the consumers of ganja can get ganja when they require it from the cultivators receives confirmation from these statistics. In Bombay the number of shops is stated to be nearly double the number of retail licenses, and the difference is not explained. The number of souls per shop is only 24,681. No doubt density of population is an element in the consideration, and thinly populated tracts will require more shops proportionally than where population is dense; but the number of shops in the North-Western Provinces, Punjab, Central Provinces, Sind, and Berar seem to require attention with reference to these remarks. A considerable reduction of shops has been under consideration in the North-Western Provinces which was to come into force in 1893-94.

(c) Consumption on the premises.

684. The hemp drug shops in British India are rarely used as smoking resorts. They are not unfrequently shops where other articles are also sold. If not, they are generally small and incapable of affording accommodation for a number of persons. Ganja smokers who smoke in company generally congregate in places of public resort or in their own houses. And the evils which result from consumption of liquor on the licensed premises in England may be said to be unknown in connection with ganja shops. There are a few witnesses who in answer to the Commission's question on the subject say that such shops are undesirable; but these remarks are mainly founded on theoretical objections, not on practical experience. In the Central Provinces consumption on the premises has been prohibited since 1891, but there is no information as to the origin of the prohibition. It seems probable, however, that when the prohibition was issued as regards madak and chandu, the clause was made to include the hemp drugs without special inquiry. In the City of Bombay there are two classes of shops—those in which consumption on the premises is permitted, and those in which it is prohibited. With reference to the former, Mr. Campbell, Collector, says: "I think it is a good thing to have some shops in Bombay City where the drugs are consumed on the premises. It keeps the consumers under notice. The shops are bound to close at a certain hour and the consumers to behave in an orderly manner. This tends to regulate the practice and control the habits of consumers. The closing of the chandu and madak shops is said to have really increased the number from 14 shops to about 150 clubs. The latter are not open to inspection or visit by the authorities. As a matter of fact, too, consumption of ganja within licensed shops is really small and shows no serious evil." Places for sale and consumption of ganja are contemplated by the old Bengal Acts II of 1866 and IV of 1866 relating to Calcutta. The Excise law is generally silent on the subject. The Commission have no recommendation to make on the subject which may be left to the discretion of Local Governments. In the course of their inquiries in the North-Western Provinces, it came to the notice of the Commission that in Lucknow shops were kept by females (called Sakins) for the sale of hemp drugs. The witness who mentioned the fact described the "Sakins" as "worse than prostitutes." The practice was brought to the notice of the Local Government, and stringent orders prohibiting the grant of licenses to "Sakins" have been issued. It has been brought to the notice of the Commission that in Assam, where indulgence in liquor sometimes is so rife among the coolies that the garden work is entirely stopped, some planters have taken the shops themselves, and kept them

under control to prevent drunkenness. The plan is one which might be tried as regards ganja in cases where its use has any tendency to a similar result. In the Punjab and in Quetta-Pishin the licenses for retail vend have a provision binding the vendor not to sell the drugs to children or insane persons. The sale to children has been noticed by a few witnesses in other provinces, and the Commission recommend the adoption of a similar provision in all such licenses everywhere.

685. The provision made in the law or rules of the Excise Department for consulting local public opinion in regard to the opening of shops is very limited. The Bengal Act contains a provision for assigning to any municipality with its consent the functions of the Local Government relating to the grant of licenses, and after such assignment no conditions or rules may be imposed by the Local Government without the consent of the Municipality. It is not clear whether any municipality in Bengal has been invested with these powers. But in every case of licensing shops in a municipality the Collector is ordered by rule to notify to the Municipal Commissioners the sites selected for shops within municipal limits; and should they object to any of them, he is instructed carefully to consider their objections, and, if he does not agree with them, refer the matter to the Commissioner of Excise for decision, pending which he must not allow any shop to be opened on a site objected to. In no other province is there any special provision of the law for ascertaining the wishes of the people in regard to the opening of shops for the sale of hemp drugs.

Local option: Law regarding—

686. The subject of local option was put to the witnesses, who were asked whether the wishes of the people are consulted or considered in any way before a shop is opened in any locality, what measures are taken for this purpose, and whether local public opinion ought to be thus considered. The number of witnesses who have replied in the affirmative to the latter question is considerable—228 in all, of whom 31 are superior civil officers, 79 subordinate civil officers, and 104 non-officials. But very few of these witnesses express any opinion as to the method by which local opinion should be consulted. The existing practice is not to consult local opinion definitely. The opinions of local subordinate officers are received, but seldom those of the residents of the locality, though any objections which may be made are considered. With this procedure the highest authorities generally are satisfied. In Bengal, Mr. Lyall says: " No attempt at a plebiscite or anything of that kind is made. The number of shops has been greatly reduced of late years, as statistics will show. Further reduction would cause great discomfort to consumers, and I think they have a right to be considered. I am not prepared to say whether an appeal to public opinion would result in the closing of many more shops." Mr. Westmacott says: " I think it is rubbish consulting local public opinion. It generally means consulting a number of babus who are out of all sympathy with other classes, and utterly ignorant and careless of their requirements. By babus I mean those known in Bengal as the *bhadralok*, comprising pleaders and schoolmasters in great part. My remarks do not apply to zamindars, who would not come forward and give an opinion in the matter of local option, but I should undoubtedly go to them if anxious to find out what the local public opinion was. There would be no difficulty in getting public opinion in the villages, for it would be ascertained from the *pradhans* or principal raiyats; but in towns the division

Evidence of revenue authorities regarding local option.

between classes is such that there is no homogeneous public opinion, if I may use the phrase." Mr. Gupta says local "opinion is not formally consulted, but attention is paid to any reasonable objection raised against particular sites, though most of the sites being old ones, it is seldom that they are objected to. Moreover, shops for the sale of hemp drugs are not considered a nuisance, and are often accommodated in the same room where other business is carried on." In the North-Western Provinces, Mr. Cadell says: "I have never heard of any objections to drug shops. I have heard such objection regarding spirit shops. The wishes of the community should be consulted. Hitherto the objection to drug shops has always come from above, *viz.*, from the Board, the Commissioner, or the Collector." Mr. Stoker's evidence is to a similar effect. In the Punjab, Mr. Gordon Walker says: "There is nothing in the nature of 'local option.' In practice the shop sites remain as they have been established for a long time, and the necessity for a change in the way of adding new shops or closing existing ones seldom arises." It may, however, be noted that there is special provision in the Punjab for inviting the opinion of the residents of a locality regarding the opening of a new liquor shop and holding a local inquiry if necessary. Similarly in the Central Provinces, there is a modified system of local option as regards liquor shops, which are more than six times as numerous as ganja shops, but not in regard to the latter. Mr. Drake-Brockman says that the administration has all along shaped its policy on the assumption that the drug is extremely deleterious, and it is a standing order that no more should be licensed than are necessary to meet the demands of consumers, who, if a licit supply were not available, would probably supply themselves illicitly. Mr. Laurie says: "In an agricultural province like this, the people are not given to formulating their views in speech or writing; and 'public opinion' can only be arrived at by laborious research." In Madras "it has been directed that in cases of alterations in the number or sites of shops in municipalities, a list of the proposed shops with their sites should be forwarded to the Council in sufficient time to admit of its remarks being received and considered; and though in the rural tracts the location of shops is at the discretion of Revenue officers, representations from District or Taluk Boards or Taluk Unions would invariably be received with attention." In Bombay, Mr. Mackenzie says: "There is no fixed rule as to local option. In some districts it is attended to carefully; in others the Collector uses his discretion according to the information he possesses as to the demand; but in all any representation by the inhabitants for or against the establishment of a shop would have full consideration. Such representations, however, have seldom been made." The same is the case in Sind. Mr. James, the Commissioner, says: "No concession of local option in the matter of hemp drug shops has been made, nor is it necessary. Where there is sufficient demand, the farmer applies for a shop, and retailers are all grocers, and the drug forms an addition to their ordinary stock of groceries......A farmer does not, like a publican at home, stimulate sales by accessories calculated to make his shops attractive. He simply depends on the demand. The Collector and District Magistrate, after consulting the local officials, is able to judge whether a shop should be opened or not, and local residents other than the consumers of the drug take no more interest in the matter than a tailor in an English country town in the question whether a particular grocer down the street should have a license to sell claret or not. The subordinate officials whom the Collector would consult before

deciding......no doubt ask the local zamindars or Hindu mukhi their opinion upon this as upon most matters affecting the peace and comfort of the village. But the matter is too insignificant for any formal rule to be made or to be necessary."

Other evidence.

687. It is perhaps doubtful what might be the effect of an attempt to canvass public opinion more completely than is at present done. A missionary in Bengal and another in Assam think that local public opinion would close every ganja shop. But Mr. Cockburn, an officer of long standing in the Opium Department, North-Western Provinces, says: "If the wishes of the people were consulted, the number of liquor shops would be at once doubled, and ganja and bhang obtained at every bania's." Mr. Thorburn, Commissioner in the Punjab, takes the same view. A missionary in Madras, who is an advocate of prohibition, says: "I do not see the use of consulting local opinion on such a question. Though public opinion is decidedly against the use of hemp drugs, it is doubtful if the majority of the people would take the trouble to express any opinion on the subject, while consumers of the drug would certainly try to show that opinion was in favour of opening such shops." One witness in the Central Provinces sees serious objections to referring the question to public opinion on the ground that, "whenever public opinion is taken, it has led to many difficulties and mal-administration." There are three opinions, two in Bengal and one in Madras, for consulting district and local boards as well as municipalities regarding the opening and shutting of shops; and one witness in Bengal would ascertain local option through the panchayats which exist under the Chaukidari Act; but none of these witnesses seem to have much confidence in the plan they propose.

Commission's view of local option.

688. The Commission feel that except in municipalities where the responsibility of regulating the number of the shops might with advantage be shared by the District and Municipal authorities, there is not much need or opportunity for soliciting public opinion in regard to the matter; but that the leading rural notables, zamindars, or headmen should be consulted by the subordinate officer who reports the case when new shops are proposed, and that objections, if presented, should continue to receive the most careful attention. But the district officer must be wholly responsible for not allowing shops to exist where there is not a demand for them.

Maximum of possession.

689. The object of limiting the amount of the drug which may be legally possessed by any one person is to place a check upon smuggling and to restrict consumption. The imposition of this limit is specially required where the proximity of Native States affords facilities for the former; and recommendations for lowering the maximum are made by several witnesses in this connection. Consumption is also thereby checked, for not only is excess fostered by the possession of a large store, but means are afforded for more extensive distribution of the drug. The maximum of legal possession is very different in different parts of India. The limit as fixed by Act XXII of 1881, which is in force in the North-Western Provinces,

the Punjab, the Central Provinces, Ajmere, Coorg, and Quetta-Pishin, is as follows :—

Ganja or charas, or any preparation or admixture thereof	...	5 tolas.
Bhang, or any preparation or admixture thereof	...	¼ sér.

This amount is held to be reasonable by the Excise Commissioner, North-Western Provinces, and there are no opinions of any weight in favour of its alteration.

In Bengal the limit fixed by Bengal Act VII of 1878 is as follows :—

Ganja or bhang, or any preparation or admixture of the same	...	¼ sér.
Charas, or any preparation or admixture of the same	...	5 tolas.

There are several witnesses who recommend the reduction of the maximum for ganja to 5 tolas ; and, though the subject has not been noticed by any very high authority, the majority of these witnesses are men of special experience in excise matters. As regards ganja imported from the Orissa Tributary Mahals, the Bengal Government has authority under the Act to fix a lower maximum, and it has accordingly fixed 5 tolas.

In Madras the Act (I of 1886) provides that the Government may fix a limit. No such limit has been prescribed, and the Commission are of opinion that this should be done.

In Bombay and Sind the Act (V of 1878) prescribes the limit fixed by the Government for retail sale as the limit of possession. This limit has been fixed by notification for the whole Presidency at 40 tolas or half an Indian sér for all intoxicating drugs. There is a considerable amount of evidence in Bombay that this limit is too high. Mr. Mackenzie says that it might be very considerably reduced, and four Collectors, Messrs. Campbell, Monteath, Woodward, and Lely, recommend the adoption of 5 tolas as the limit for ganja. Eleven other witnesses in this province advocate reduction of the maximum. In Sind there are fewer opinions on the subject, but there also the reduction of the limit is recommended by three witnesses.

In Berar no limit of possession is prescribed ; the limit for retail sale is—ganja and bhang, 20 tolas ; charas, 5 tolas. Three witnesses recommend reduction of the limit, two of whom are excise officers.

The Commission's view.

690. As regards ganja and charas, and any preparation or admixture of the same, the Commission are of opinion that there should be one limit for the whole of India, and that this limit should be 5 tolas. It is only in Bengal that this measure would require an alteration of the law, and the opportunity should be taken when the Excise Act is amended to make the necessary provision. It is understood that the subject has already been under discussion, and that this amendment of the law has been recommended by the Excise Commissioner. As regards bhang, the limit is nowhere less than ¼ sér. This limit is probably low enough where the hemp plant grows wild, *viz.*, in the Bengal Presidency. For other provinces, where bhang is merely the refuse of the ganja plant, the question arises whether the limit ought

to be higher than in the case of ganja. But upon the whole the Commission think that the two products, ganja and bhang, are sufficiently distinct, and that no great objection exists to allowing a higher maximum. They would therefore recommend that 5 tolas for ganja or charas and 20 tolas or ¼ sér for bhang be regarded as the proper maxima for all provinces, and that as opportunity offers all Native States be advised to accept these limits. There is certainly some advantage, considering how British territory is interlaced with Native State territory, in having one standard in this respect for the whole of India.

Taxation of hemp drugs according to strength.

691. In the case of the excise of spirits, the duty is levied on the alcoholic content of the liquid as determined by the percentage of proof spirit present, and, in view of the varying amount of resin extraction present in different qualities of hemp drugs (on which the narcotic value depends), it might be argued that the equitable mode of levying duty would be by the adoption of a sliding scale, the duty varying with the percentage of resin extraction present. But there are at present practical difficulties against the adoption of such a system. The physiological value of the resin extraction present in all samples is not similar; and, though two specimens may contain precisely the same percentage of resin extraction, it does not follow that the narcotic power of the drugs would be equal, and also that the percentage of extraction in the drugs may vary from year to year. The Commission, therefore, make no recommendation regarding the taxation of hemp drugs according to their strength.

Burma.

History of prohibition.

692. The province of Burma stands on a different footing from that of any other province, inasmuch as the hemp drugs are entirely prohibited. This prohibition was put into force in the year 1873 and embodied in the Excise Act, 1881. The Chief Commissioner has power to grant special licenses for cultivation, sale, and possession of the drugs; but the power has not been used. The prohibition arose out of the inquiry made by the Government of India in 1871. Sir Ashley Eden, then Chief Commissioner, recorded the following remarks regarding ganja in his review of the Excise Report for 1870-71: "The sale of this article is prohibited at Ramree, Sandoway, Tavoy, and Mergui, and the Chief Commissioner considers that no further addition should be made to the number of places for the sale of this pernicious drug, which is smoked only by the natives of India. Indeed, he would be glad to have the opinion of the Commissioners as to the possibility of withdrawing all licenses for the sale of ganja throughout the province. Its use is at present happily little known to the people of the country; at the same time there is every reason to fear that a taste for it may be spread among them by the people of India as in the case of opium. It certainly seems to the Chief Commissioner that it is very desirable to at once sacrifice the small revenue derived from this source and stop the consumption absolutely before the evil comes upon the country. The only sufferers from the cessation of the supply will be a few of the Indian labourers who come to work here during the rice season. They must learn to take the want of ganja as one of the discomforts of a sojourn in a foreign land, for which they are amply compensated by the large earnings they obtain. The Chief Commissioner observes that the percentage of persons admitted to

the Dacca Lunatic Asylum in Bengal who had lost their intellect from the effects of ganja was from—

	Per cent.
1860 to 1867	45·4
1868 to 1870	34·7

It has been said that some ganja has been grown lately in this province. The cultivation should be at once checked." A copy of these remarks, together with the opinions of local officers, civil and medical, was sent to the Government of India in reply to the enquiry. There is very little in the opinions which goes to establish the injuriousness of the drugs, and it may therefore be taken that Sir Ashley Eden's strong expression of opinion embodies the reasons for which the Government of India concurred in absolute prohibition which was enforced from the beginning of the year 1873-74. Apparently Sir Ashley Eden relied largely upon the statistics of the Dacca Lunatic Asylum for his opinion. The arguments to be derived from these statistics have been considerably modified by the Commission's investigations. In 1878 the Government of India addressed the Chief Commissioner of Burma in the following terms: "In 1873 the sale and cultivation of ganja in British Burma were prohibited. In September 1874 the import of the drug by sea was also prohibited. These arrangements received the approval of the Government of India on the understanding that it would be possible by this means to prevent the use of ganja altogether in British Burma. Your present proposals show that it has not as yet been found possible, and tend to throw some doubt upon the policy of 1873 and 1874. I am therefore directed to request that you will be good enough to examine the result of the repressive measures already adopted, and favour the Government of India with your opinion as to whether it would be advisable to persevere in the attempt to prohibit absolutely the use of ganja in British Burma, or whether it would not be preferable to revert to a system of licensed sale of the drug upon payment of heavy duties." The Chief Commissioner, however, considered that "a return to the license system would be a retrograde step, and that the possession of ganja in British Burma should be altogether prohibited by law. The grounds for this opinion are that ganja is admittedly more baneful than opium; that as yet the drug is unknown to the Burmese, or at any rate is not used by them to such an extent as to become a luxury the sudden withdrawal of which would be felt; that in the Arakan Hill Tracts the total prohibition of ganja has worked well; and that the people of Burma at present addicted to its use are solely, it is believed, immigrant natives of India" (Excise Report for 1877-78). These views were accepted by the Government of India, and the provisions relating to Burma in Act XXII of 1881 were the result. From that date the subject was not mentioned in the Excise Reports for the next 8 years. In the report for 1890-91 the only notice is that one Burman was prosecuted for cultivation of ganja. In the report for 1891-92, 31 breaches of the Excise law in respect of ganja are mentioned, in which 27 convictions, involving 236 tolas of ganja, were secured. This was in the Arakan Division. There is a special statement for Upper Burma showing 12 tolas of ganja confiscated in Yew and 13 viss and 1 tola in Lower Chindwin. The same statement for 1892-93 shows 2,000 tolas of ganja as confiscated in Yew and 532 (or 352) in Upper Chindwin. There is still no mention of the subject in the reports.

693. A statement has now been furnished to the Commission showing the seizures of ganja for the past five years and during the first eight months of 1893-94.

Smuggling of ganja in Burma.

These are as follows:—

	Tolas.
1888-89	17,754
1889-90	626
1890-91	1,218
1891-92	2,430
1892-93	5,856
1893-94 (8 months)	30,353

In commenting on these figures, the Assistant Collector of Customs and Superintendent, Preventive Service (Mr. Culloden), says: "That there exists a demand for the article, and that high prices are paid for it no one can deny...... The illicit traffic is kept up with more or less of regularity, the largest quantities coming from the Madras coast. Advantage has also been taken of smuggling the drug by post...... Punjabis, Pathans, Natives of Upper India, and Madrassi sepoys are those addicted to the use of ganja. The attempts at smuggling have been more frequent since the introduction of the Punjabi element in the Police force...... No case of Burmans making use of ganja has ever been brought to my notice." In his oral evidence before the Commission, Mr. Culloden stated: "I have been in Burma since 1853, and my experience of ganja has dated since then. I have been in the Customs Department ever since. My jurisdiction extends along the river bank from Pegu river to Kemendine on the Irrawaddy......... I think that since 1873 the importation of ganja has been going on regularly without diminishing. I think that of late years it has increased very much. There are many more natives of India. That would explain increase. In regard to seizures, a sudden drop in the number may be due to a change in the practices of smugglers. Then we would not know how to search for and detect consignments until we learned their new ways. This would in turn lead to a rise in the number of seizures till their plans were changed. This is the only explanation I can give of the great drop in 1889-90 and the increase in 1893............ I hear and believe that there is a great deal of ganja in the country. I have been told by informers that the drug costs a rupee a tola." Mr. Lewis senior Excise Officer in the town of Rangoon, who has been 32 years in Burma and 18 years in Rangoon, gives similar evidence; but he says that the price of ganja in the bazar is now only four annas a tola. He adds: "I am afraid, I must say, that the prohibition is ineffective in Rangoon. The consumers get their ganja all the same, and hundreds are getting a living by it .... I do not believe that ganja could be stopped even by an army of officials and constant interference with the people. If they could not get it otherwise, they would send small quantities in letters. I do not know what would happen if ganja were not produced elsewhere; but so long as there is ganja available in India, they will have it in Burma. Our preventive measures undoubtedly lead to oppression. False charges are frequent............... Ganja is not only weight for weight cheaper than opium, but the ganja habit is a cheaper habit............The Burman consumers, however, were very few. Burmans use ganja for their cattle, not for themselves. The few consumers abandoned the

habit on the prohibition. I do not think that the Burmans would ever take to ganja. During my thirty years' experience I have found that they do not take to it. They take it for their cattle only."

694. These opinions have been quoted at some length, as the Customs officers are in the best position for giving an opinion regarding the smuggling of ganja. But the majority of the witnesses who have means of knowing about the subject are of the same opinion regarding the failure of the prohibition to keep ganja out of the country. They also consider that nothing more than has been done can be done to render the prohibition effectual. The Commission are of opinion that the prohibition has not been effectual, and that strong reasons are required to justify its maintenance. In regard to this subject opinions are divided. Three Commissioners (1, 2 and 3), notwithstanding their admission that the prohibition is ineffectual, are in favour of maintaining it. Three Deputy Commissioners (12, 14 and 10) hold the same view. Their object is to keep the drug from the Burmans. Three Deputy Commissioners (9, 16 and 6) would be willing to see a system introduced which would enable the natives of India to get the drug on payment of duty, provided the Burmans were not allowed to have access to it. The Bishop of Rangoon, who was 20 years as a Medical Missionary in Madras, and has spent 11 years in Burma, seems to incline to the same opinion.

Failure of prohibition.

695. The Commission have formed the opinion that the Burmese have no natural propensity for the drug. Had this been the case, there would have been some evidence of its use by them before the prohibition was issued In the report for 1872-73 it is stated that ganja was "obtainable in any quantity in Upper Burma, although it is not used by the Burmans." There is evidence that it was produced to a considerable extent in Upper Burma before British rule, or at least that it was imported thither from the States adjoining it. Yet the habit does not seem to have been formed by the people. Nor is there any evidence to show that the Burmese in Lower Burma ever took to the drug either before or since the prohibition, though it is clear that there was no great obstacle to their doing so. While holding this opinion, the Commission have no desire to advocate the entire removal of the prohibition They think it is unnecessary to interfere with it so far as it concerns the Burmans. They have no desire for the drug, and might not take to it in the future any more than they have in the past; but there is no objection to keeping it out of their reach. In regard to the natives of India, the case is different. The present illicit traffic is demoralising to them and to the Government servants who are powerless to deal with it. The strong justification necessary to maintaining the present state of affairs is not to be found in the conclusions at which the Commission have arrived in regard to the moderate use of the drug. It would, in the opinion of the Commission, be better to license this use of the drug under proper control and taxation than to maintain an unworkable prohibition. No change in the law would be required, as the Chief Commissioner has the necessary powers under the Excise Act in force. The Commission, it is true, do not much believe in the possibility of restricting the use of an intoxicant by registration or otherwise to special classes of the population. The experience which will be gained in regard to the recent measures for regulating the supply of opium in Burma will show whether their view is

Conclusions of the Commission regarding Burma.

correct or not. But in the case of ganja there seems little or no risk of the Burmese taking to its use in contravention of the law, inasmuch as they seem to have no predisposition to do so. Under these circumstances the Commission would recommend that where there is a demand for the hemp drugs among natives of India in Burma, provision should be made for meeting this demand by a licit supply under the same regulations as are in force in other non-producing countries, the prohibition of cultivation being maintained as well as that of the use by the Burmans.

CHAPTER XVII.

SYSTEMS OF NATIVE STATES.

Systems in Native States.

696. The foregoing chapter contains the views of the Commission on the introduction throughout British India of a system of excise in regard to hemp drugs which will be ultimately uniform. But this uniformity of system must necessarily fail of its purpose unless the co-operation of the Native States which are interlaced with British territory is at the same time secured. A brief review of the systems at present in force in Native States is therefore necessary, together with some remarks as to the desirability of securing the adoption of a similar system in those States. The material at the disposal of the Commission in regard to the States is somewhat incomplete and fragmentary, but a good deal of information of a general character has been obtained which will enable the Commission to come to some decision on the subject.

States in the Himalayan tract where the plant grows wild.

697. The conditions under which the wild hemp is found have been detailed in Chapter III. Generally it may be said that the wild growth only thrives in the Himalayan tract. The Native States falling within this tract are Kashmir, some of the Punjab Hill States, Garhwal Tehri and Rampur in the North-Western Provinces, Nepal, Kuch Behar, and the Assam Hill States. In all these States bhang is produced; but as the control of bhang in similarly situated tracts in British territory has been pronounced impracticable,* this fact need not interfere with British excise arrangements. Kashmir apparently produces no charas properly so called, and all the charas which comes to the Punjab through Kashmir is accounted for under the Punjab system of registration. A little charas comes from Garhwal and from Nepal, but the amount is not sufficient to disturb British arrangements. The cultivation of ganja is prohibited in Kuch Behar, which receives its supplies from Rajshahi, the duty being credited to the State. Ganja to a very small extent is said to be imported from Nepal, and there is considerable smuggling of inferior ganja from the Assam Hill States which has been noticed in Chapter XV. With this last exception, it may be stated generally that the system or want of system in regard to hemp drugs in all these States is a factor which need not be taken into account in the excise system of British India. And as regards the Assam Hill States, it is probable that no further preventive measures can be taken at present than those already adopted, *viz.*, prevention through the Assam Excise establishment when the drug is brought into British territory for sale. There is no system in force in the Hill States, and for some time to come it is not likely that any can be expected.

In other States the production of ganja is the most important feature.

698. The extent to which the hemp drugs are produced in the Native States in other parts of India, and exported from them to the various British provinces, has been detailed in Chapters IV and VII of this Report, so far as can be gathered from the information received. It is mainly in respect of the production of ganja that the arrangements in these States have any perceptible effect on the British excise system. The conditions of the principal States or groups of States in this respect will be briefly noticed in the following paragraphs as well as the systems in force.

699. The cultivation of hemp for ganja in Hyderabad is said to amount to 300 or 400 acres. Bhang is the refuse of the ganja so produced. There is no restriction of cultivation, but the right of selling the drugs is auctioned, and the cultivators are bound to dispose of their produce to the licensee. There are 270 shops for the sale of ganja and bhang and 50 for majum. In small districts the contract of sale is given with that of certain poisons (arsenic, strychnia, and aconite) and opium. For foreign import or export of ganja a duty of Rs. 10 per maund is levied, and of bhang Rs. 3-5 per maund. The imports of ganja as given in the State memorandum average for five years 79 maunds, and the exports 9 maunds only. But there are no reliable statistics. The Director of Agriculture puts the outturn at 5 to 6 maunds per acre, which would give a result of from 1,500 to 2,400 maunds per annum. Of this, only an average of 300 maunds is traceable as having been transmitted by railway. There is no record of the ganja transmitted by other means.

Hyderabad.

The Hyderabad State marches with the Madras and Bombay Presidencies, Berar, and the Central Provinces, but only for a short distance with the last named. There are no complaints of smuggling from Hyderabad into the Central Provinces, though smuggling from Berar is mentioned. If ganja is systematically treated in Madras, Bombay, and Berar, the arrangements will be incomplete unless a similar change is made in the Hyderabad State; and as the regular cultivation in the latter appears to be confined to certain definite areas, control will probably be quite feasible should the Darbar agree to exercise it. For the present, however, the existing arrangements under which the produce must all be made over to the licensed vendors and a tax levied on all imports and exports will, if they are observed, be sufficient to check the export of ganja to British provinces. When by reason of the perfecting of the system in British territory the inducements to smuggle cheap ganja from Hyderabad are increased, it will then be advisable to suggest to the State the desirability of exercising more complete control over the cultivation of the plant and its produce.

700. The administration of excise in Mysore in respect of hemp drugs is based upon Act XXII of 1881, which is in force in the State, and is in advance of that of both the presidencies which adjoin it. Cultivation is forbidden except under license, and the produce of all licensed cultivation must be sold to the licensed contractor or exported under a pass. But licensed cultivation has been practically abandoned; and though it is stated in the memorandum that illicit cultivation and smuggling are not carried on to any appreciable extent, there seems some doubt whether this view is correct. Mr. McDonnell, the Special Assistant Excise Commissioner, states that, "owing to the heavy dues imposed by the State (Rs. 24 per Indian maund) and the abnormally low price of ganja across the frontier, there are strong inducements to commit a fraud on the Mysore revenue." Thus, although the climate and soil of the State are well adapted for the production of the ganja plant, the regulations introduced by the State authorities for controlling its production have had the effect of stopping it altogether owing to the want of system in British territory and the facility with which it is procurable thence at a much lower rate; and a large amount of the ganja

Mysore.

imported pays no duty. In regard to this, Mr. McDonnell says: "Mysore is heavily handicapped by the extensive smuggling of ganja from Her Majesty's territory."

The system of licensing sale and levying fees therefor in Mysore may be thus briefly described. A contract is given to a single person on condition that—

(1) he pays duty on wholesale vend to the Darbar at the rate of 6 annas per sér for ganja and 2 annas for majum, etc.;

(2) he sells at fixed rates to retail vendors, *viz.*, ganja 10 annas per sér, and majum, etc., 4 annas per sér;

(3) he sells to retail vendors in quantities not less than 10 sérs of ganja and 5 sérs of majum in Bangalore and Mysore, and 5 sérs of ganja and 2 sérs of majum elsewhere;

(4) the drugs shall be of good quality, and that registers are kept, etc.;

(5) he guarantees a fixed sum to the Darbar.

The sér in Mysore consists of 24 tolas. The amount guaranteed appears to be fixed by tender. There are 57 wholesale shops licensed free, and 109 retail shops which are not ordinarily sold by auction, but licensed free, except in Mysore and Bangalore, where Rs. 3 per mensem is paid for each license. Retail vendors have to sell to the public at the rate of 13 annas per sér for ganja and 6 annas per sér for bhang, and may not sell more than 4 tolas to any person on the same day. Charas is unknown, and bhang is the refuse of ganja.

Thus there is a very complete system at work in this State, though some of its details may be open to criticism, and the principal difficulties attending its administration arise from the want of system in British territory. Ganja is freely imported into the State from Madras, and it has been shown (Chapter VII) that it is also probably imported from the Dharwar district in Bombay. This appears to the Commission to afford a cogent argument for the introduction of control in the Madras and Bombay Presidencies.

Baluchistan.

701. The Commission have little information regarding Kalat and Las Beyla. But there is no export of the drugs from these States to British India, so the matter is of no importance.

Baroda.

702. Prior to 1892 there was no restriction on the preparation or sale of the hemp drugs in Baroda. A State monopoly of sale was then introduced. Cultivation of the plant is not prohibited, but it is reported to exist only in one village, and to a very limited extent. No exports to British territory are reported, and there is evidence to the effect that since the introduction of the license system smuggling from the State into British territory has almost entirely ceased. A large amount of the drugs is said to be imported from other provinces or States. A customs duty is levied on the imports, but the amount is not stated. There are 101 shops for sale of ganja, etc., and as many as 157 more have been sanctioned, but not opened. Charas is not used. In this State the arrangements are, therefore, fairly complete. If owing to the introduction of a more systematic treatment the price of ganja in the Bombay Presidency were to rise considerably, cultivation in the Baroda

State would very probably revive; and as there is now practically no cultivation, the present time would be opportune for moving the State to introduce a thorough system of control in this respect also.

Central India Agency.

703. The information regarding the excise administration of the Native States in Central India in respect of hemp drugs is very incomplete. From Gwalior, where there is a considerable amount of ganja produced, no information has been received except that which has been furnished through the North-Western Provinces. Through the courtesy of the Agent to the Governor-General, a useful memorandum has been recorded by Mr. R. H. Gunion, of Indore, which puts in a compendious form all the information obtained from the other States in the Agency. The Minister to His Highness the Maharaja of Holkar has also given a full account of the administration of that State.

There is cultivation of the hemp plant for the production of ganja in Indore, Baghelkhand, Dewas, Bhopawar, and Gwalior, and possibly also in Bhopal and Western Malwa. There appears to be no restriction of cultivation in the Central India Agency, and Mr. Gunion thinks that there is no system of licensing sale of the drugs except in Indore and Rewa, though the Commission have ascertained from other sources that sale is licensed in Gwalior and Bhopal. Mr. Gunion's opinion that there are no restrictions on manufacture or on import and export of the drug, but that duties are levied on it as on other merchandise, appears to be correct.

Indore.

704. In Indore the average cultivation, which is said to be on the decrease, is reported by the State officials above mentioned to be about 181 bighas or 113 acres, and the average imports and exports of ganja 153 maunds and 377 maunds respectively; but in 1892-93 the imports amounted to 84 maunds and the exports to 1,318 maunds. It is therefore clear that the exports exceed the imports. Mr. Stoker says that a little ganja is imported into the North-Western Provinces from Indore. Mr. Drake-Brockman says that ganja is largely grown in the Sanawad pargana of Indore, which separates the Kanapur Beria tract from the rest of the Nimar district in the Central Provinces, and there is thus a considerable area into which the introduction of Indore ganja is practically inevitable. Accordingly in 1879 a suggestion was made to the Agent to the Governor-General that exports from Indore territory should be taxed and only permitted under formal pass, and a duty of Rs. 7 per maund was fixed by the Darbar. This seems to have checked smuggling, for the evidence from the Central Provinces is against its prevalence, though some still exists. Mr. Gunion's estimate of the amount of ganja and bhang annually produced is 900 maunds. The right to sell by retail is auctioned. There were 45 licenses in 1892-93. The income from this source appears to be on the increase, and this is the case also as regards the fixed duties since 1886-87. In the latter year they amounted to Rs. 461. In 1892-93 they were Rs. 3,111.

It is evident that the Indore State possesses considerable facilities for the production of ganja and for its distribution in British territory, and in the interests of the system of administration proposed for British provinces it is extremely desirable that the production of the drug in this State should be brought under control.

705. All that is known about the administration of the hemp drugs in Gwalior is that the cultivation is reported to be about 400 acres; that a duty of Rs. 5 per maund is levied on all ganja exported to British provinces, and Rs. 2-8-0 per maund on ganja transported from one place to another in the State; and that the cultivator may only sell to a licensed vendor. The Commission also have information that the cultivator pays Rs. 12 per acre over and above his fixed rent; but whether this payment is made to the State is not clear. There is a fixed rate for retail sale, 4 annas per sér. Mr. Stoker is of opinion that the Gwalior ganja is gaining ground in the North-Western Provinces, and is being substituted for the Khandwa ganja, while both together are ousting the supply of Bengal ganja. The cultivation is said to be confined to three tahsils of the State—Antri, Sipri, and Kalaras; so the control of cultivation would probably be a simple matter; and if such control can be brought about, it would greatly facilitate the North-Western Provinces administration. Some charas is produced, but apparently in very small quantities; bhang of a superior quality is produced at Ujjain and Sipri. The State is bound by special arrangement to prevent export into British territory. (Gwalior Salt Agreement, Aitchison, No. XXI, Article 6.)

Gwalior.

706. All that has been ascertained in regard to Bhopal is that there is a licensed contractor for each pargana who sells by retail in his own shop, and authorises others to do so as his agents. Mr. Drake-Brockman says that local transit dues are levied, but they are not sufficiently high to check transport into the neighbouring districts of the Central Provinces. Mr. Gunion says that about 100,000 persons are said to use one or other of the hemp drugs. The Commission have no information regarding cultivation in this State. It adjoins the Central Provinces, and control of the hemp drugs is very desirable from this point of view.

Bhopal.

707. The principal State in the Baghelkhand Agency is Rewa. There is some cultivation for ganja, but no particulars have been ascertained. There are contractors for sale of the drugs who are said to pay a fixed duty and license fees to the State. The greater part of the population are Vaishnavas, and the population in general are said to be opposed to the use of the drug. A little charas is said to be imported from Patna. The Agency lies between the North-Western Provinces, the Central Provinces, and Chota Nagpur, and any want of control in the matter of hemp drugs would probably have a serious effect on the excise administration of those provinces.

Baghelkhand Agency.

708. There is no information in the memorandum regarding the administration of the States of the Bundelkhand Agency. But Mr. Stoker mentions the Agency as one of the main sources for supply of ganja to the North-Western Provinces. In all the States, he adds, there is some duty on export, but it is variable and unequal. In one place it is 2 annas per rupee of the price, which would be about Re. 1 to Rs. 2 per maund. In another it is said to be Rs. 1-9-0 on each purchase irrespective of quality. But these rates require confirmation. Mr. Stoker is not sure that all the ganja which comes from these States is of local growth, and he suspects some of it comes from Gwalior or Khandwa originally. The plant is, however,

Bundelkhand Agency.

said to be cultivated to some extent, and the produce not to be distinguishable from Gwalior ganja. Mr. Stoker notes that this source of supply is capable of extension. The capital and a great part of the Chirkari State is situated in the middle of the Hamirpur district in the North-Western Provinces. The country is wild and mountainous, and prevention of smuggling is impossible. From the Panna State there is considerable smuggling into the Damoh district of the Central Provinces. It is very desirable in the interests of the excise administration of the North-Western Provinces that the cultivation and production of the drug should be controlled in this Agency.

Bhopawar Agency.

709. Mr. Gunion says that all over the Bhopawar Agency the hemp plant is cultivated for ganja and bhang, rarely for charas. The production is limited, and, except in the parts adjoining British Nimar, only for the personal use of the cultivators. No other information has been obtained. Mr. Robertson, Deputy Commissioner of Nimar, says that ganja smuggling from the Native States which border on Nimar, though it no doubt exists, has never been a prominent matter in Nimar. It is the general opinion, however, that a good deal of petty smuggling exists.

Western Malwa Agency.

710. Mr. Gunion mentions a kind of ganja called 'gorakhi,' which is said to be made from the wild plant in the Jaora State of the Western Malwa Agency. The Commission are in possession of a statement made by Surgeon Lieutenant-Colonel Caldecott, Agency Surgeon, that there is cultivation for the production of charas, bhang, and ganja all over Malwa, but he is unable to say to what extent. The States of this Agency (Jaora and Rutlam) do not adjoin British territory.

Rajputana Agency.
Jeypore.

711. In the Jeypore State there is practically no system of administration of the hemp drugs. Customs duty is levied on import and export at the rate of Rs. 4 per maund for ganja, Rs. 20 per maund for charas, and Re. 1 per maund for bhang. There is also an inland customs duty of 4 annas per maund on bhang. There is no restriction in regard to cultivation, manufacture, sale, or possession of the drugs. As noticed in the chapter on cultivation, it is stated in the memorandum that 10,000 maunds of bhang are produced, indicating a large rural consumption if the figure is correct; for only 27 maunds are said to be exported. Ganja and charas are imported, not produced in the State. Jeypore does not adjoin British territory, and further control is not at present essential to the success of a system of administration in the British provinces.

Jodhpur.

712. Duties are levied in the Jodhpur State as follows:—

	Import duty per maund.			Export duty per maund.			Transit duty per maund.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Ganja and Charas	4	8	0	4	8	0	3	0	0
Bhang	0	2	0	0	2	0	0	2	0

It is said that a Government duty of Rs. 2 per maund is charged on the import of ganja; but this is not further explained. There is no restriction on the cul-

tivation of hemp, which is not systematically grown, but in a few villages seeds are sown round the fields where crops are raised. The import of ganja and charas under parwana from the Residency amounted to 1,735 maunds during the ten years 1883-84 to 1892-93. The imported ganja mostly comes from Indore. The ganja produced from the sporadic growth of the plant is called 'makuria,' and being of very inferior quality is said not to be offered for sale. A contract for sale of the drugs has been given since 1880 in the towns of Jodhpur and Pali, which is auctioned to the highest bidder. There are 14 retail vendors in Jodhpur, all of whom are under the control of the contractor, who himself has two shops in the town. The retail vendors are ordinary shopkeepers, who sell the drugs along with other articles. There are no retail vendors in Pali. Elsewhere there is no restriction on the sale of the drugs. Jodhpur does not adjoin British territory.

Udaipur.

713. No memorandum has been furnished from Udaipur. The State does not adjoin British territory. There seems to be a certain amount of production of ganja and bhang, but the use of ganja and charas seems to be very limited.

Bikanir.

714. The excise of the drugs was introduced in 1893. There is no restriction on cultivation, but the cultivators may only sell their produce to the State contractors. Contracts for wholesale vend are sold by auction at the tahsils, and the contractors obtain licenses for their retail vendors, and are permitted to sell by retail themselves. The shops for retail vend are not auctioned. The contractor fixes the prices for retail sale, subject to a minimum fixed by the State officials. A customs duty on imports is levied at the rate of Rs. 20 per maund for ganja and charas and Rs. 5 per maund for bhang. Under an agreement with the British Government, the export of intoxicating drugs from the State into British territory is prohibited. (Bikanir Salt Agreement, Aitchison, No. CXXVIII, Article 5). The observance of this provision will render any further action in regard to this State in the interests of the British excise administration unnecessary at present.

Alwar.

715. There is no restriction on cultivation, but bhang only is produced on well lands and on the borders of fields. Ganja is unknown; a little charas and bhang is imported. The monopoly of the import and sale of the drugs is granted to a contractor, together with that of poppy and opium, for a fixed sum. There is no duty on import, but an octroi duty of 10 annas per maund is levied on bhang. The contractor is at liberty to make his own arrangements regarding sale of the drugs. The number of retail shops in 1893 was 44. No limit has been fixed for retail sale or possession. Alwar adjoins the Delhi Division of the Punjab.

Bhartpur.

716. The hemp drugs are said not to be produced in Bhartpur. A customs duty on imports is levied at the rate of Rs. 10 per maund on charas and Rs. 5 per maund on bhang. There is no further restriction apparently. The drugs are imported. There is apparently no cultivation now, though some formerly existed. Bhartpur adjoins the North-Western Provinces. The conditions existing in this State are not likely to affect British excise administration.

Kotah.

717. The monopoly of vend in the Kotah State is auctioned to contractors. Besides the revenue thus realised, a duty of Re. 1 per maund is levied on ganja imported into the State, and the same on bhang brought into the town of Kotah. A transit duty of 8 annas per maund is also charged on ganja and bhang. Charas is not imported. There is a small local production of ganja and bhang, but no regular cultivation. It is stated that there is a "ruling" of 1881 about buying, selling, and possessing intoxicating drugs, but it is not enforced. This State does not adjoin British territory.

Tonk.

718. Beyond the levy of a customs duty at the rate of Rs. 20 per cent. of value on all hemp drugs in Tonk and Aligarh, Rs. 6 per maund in Chabra, and Rs. 8 per maund in Sironj, there is no excise administration in respect of the drugs in the Tonk State. A proposal to draw up a set of rules is under consideration. Ganja and charas are imported, not produced. Bhang is produced in the State and imported from Jeypore. The State does not adjoin British territory.

Jhallawar.

719. An import duty of 8 annas per maund of 35 sérs on ganja and bhang and of one anna per maund on charas is levied in the Jhallawar State, and it is said that there are local dues of 2 annas per maund on ganja and bhang, while one per cent. is levied on all sales of either drug, weighment dues being also levied when they are sold by weight. There is a licensed farmer of the drugs in the cantonment. Beyond this, there is no excise system in respect of hemp drugs. The extent of cultivation is about 30 acres, producing about 155 maunds of ganja and 30 of bhang. The trade returns do not distinguish between ganja and bhang: the average import of both drugs is said to be 105 maunds, and the export 120 maunds. Charas is not used. The State does not adjoin British territory.

Bundi.

720. Import and transit duties are levied in the Bundi State at the rate of 8 annas per maund on all hemp drugs imported into or passing through the State territory. Beyond this there is no system of administration in respect of hemp drugs. It is stated that the drugs are not manufactured in the State, but that cultivators grow hemp on land irrigated by wells as other crops. The drugs are imported from other States. The import of bhang is large, averaging 9,385 maunds; that of ganja and charas is small, amounting to 100 and 25 maunds respectively. The total import duties amount to Rs. 4,440 and transit duties to Rs. 610. The State does not adjoin British territory.

Dholpur.

721. In Dholpur import duties are levied on ganja and bhang at Rs. 4-4-0 per maund and on charas at Rs. 1-1-0 per sér. In the Sri Mathra Estate the duties are—ganja Rs. 4-8-0, charas Rs. 6, and bhang 6 annas per maund. Export duty is also levied—ganja 9 annas per maund, charas Rs. 3 per maund, and bhang 3 annas per maund. There is one contractor for the whole State, who appoints his own sub-contractors in the parganas. Apparently the whole trade, both wholesale and retail, is in the hands of this contractor. The cultivation of intoxicating drugs is prohibited without permission of the Darbar, and there is no manufacture of the drugs in the State. The imports are by rail and road from British districts;

Gwalior and Patiala, under passes granted by the Collectors or Political Agents concerned. The traffic is not large. Dholpur adjoins the North-Western Provinces.

722. In Banswara no memorandum has been furnished, but the Commission have information from the officials that ganja and bhang are produced. The State adjoins the Bombay Presidency. Nothing is known of the system of excise administration.

Banswara.

723. A statement has been furnished for Serohi which shows that licenses to sell ganja are given for seven places in the State, and a revenue averaging Rs. 386 per annum realised for license fees (Rs. 863 for 1892-93) and Rs. 145 for fixed duty. There are license holders, but they keep no record. Only ganja is imported, the average being 32 maunds per annum. Cultivation is unrestricted and not recorded. The Kotwal of Serohi estimates the outturn of ganja produced in the State at 8 maunds, and bhang at 300 maunds. No exports are shown. It is stated that the whole of the ganja and bhang produced in the country, averaging one maund of the former and 40 maunds of the latter, is recovered from the cultivators and given in charity and sent to the temples of Mahadeo, and some is used in liquor. The State does not adjoin British territory.

Serohi.

724. Customs duties are levied in the Kerowli State on imports at the rate of Rs. 2-8-0 per maund on ganja, Rs. 10 on charas, and Re. 1 on bhang. During the Shivratri fair in February the duties are suspended. The right of retail vend at three towns is sold by auction, and there are 8 licenses for retail vend. No further control is exercised. The plant is cultivated for bhang, and ganja is imported. The transactions shown are very small, but the license fee averages Rs. 1,157 per annum. The State does not adjoin British territory.

Kerowli.

725. The only system of control in force in the Kishengarh State consists in the levy of duties (apparently import duties) at the rate of Re. 1-8-0 per maund on ganja and charas and 4 annas on bhang. The farming system used to prevail, but has been abandoned. It is now proposed to increase the duties and to license vendors. The transactions are small. Kishengarh adjoins Ajmere.

Kishengarh.

726. In Jaisalmir there is provision for levying customs duties, but it is stated that there has been no import or export of hemp drugs for the last ten years, and that the drugs are not sold in the State. There is, however, a little cultivation for ganja and bhang, which is purchased by the consumers from the cultivators. Jaisalmir adjoins Sind, and a small amount of ganja and charas is said to be smuggled into Sind through this State.

Jaisalmir.

727. In this small State import and export duties are charged at rates not mentioned. Transit duty at 3 pies per sér is also levied on bhang exported to foreign States in addition to the export duty. There is no further control of any kind. In future it is proposed to issue licenses to a limited number of persons at a few selected places.

Shahpura.

Partabgarh and Lawa.

728. No information has been received regarding these small States.

Hill States lying between Bengal, Central Provinces, and Madras

729. It will be convenient next to notice together that tract which lies enclosed between Bengal, the Central Provinces, and Madras, comprising the Tributary States of the two first and the Agency tracts of the last named province. In this manner only is it possible to consider systematically and thoroughly the question of bringing the excise arrangements in respect of hemp drugs which prevail in this tract into some conformity with the general principles recommended by the Commission. This tract may be divided into four parts, *viz.*, the Chota Nagpur Tributary Mahals and the Orissa Tributary Mahals, both under the Bengal Government; the Chhattisgarh Tributary States, under the Central Provinces; and the Agency Tracts, under the Madras Government. The following table shows the area, population, and revenue of each of these groups :—

	No of States	Area.	Population.	Revenue.
		Sq. miles	No.	Rs.
Chota Nagpur Tributary Mahals	9	16,027	890,859	1,86,327
Orissa Tributary Mahals .	17	14,387	1,696,710	11,54,975
Chhattisgarh States ...	10	26,526	1,648,811	7,88,591
Agency Tracts, Madras ...	...	19,167	1,294,244	Not available.

Tributary States of the Central Provinces.

730. In the Tributary States under the Central Provinces the cultivation of ganja has been stopped at the instance of the Local Administration, and a supply of ganja is now furnished to these States from the Government storehouse at Khandwa. The system is that the drugs are supplied to the chiefs at cost price (the cost going to the wholesale vendor, and the Government realizing nothing), and that the chiefs must adhere to the provincial price of Rs. 3 per sér in their sales to the retail vendors The only exception is in the case of the three Western States of the Raipur district, in which under special arrangement half the duty goes to Government. Elsewhere the whole of the duty is realized by the chiefs. The present state of affairs is thus described by the Political Agent, Chhattisgarh. It should be explained that his report refers to all the Chhattisgarh States, including the four Western States which are detached from those on the Bengal or Madras border: "The only States in which the hemp plant has never been cultivated for the production of drugs are those of Kawardha and Kalahandi. In the other twelve such cultivation was at one time fully indulged in, but in all it has now been completely suppressed. The system in force may be summed up in a word as being identical, so far as the local circumstances permit, with that which prevails throughout the Central Provinces. The principles observed are practically, though not in all cases formally, based on the provisions of Act XXII of 1881 and of the Central Provinces Excise Manual. Bhang and charas are unknown in the Feudatory States, except in Nandgaon, where a little bhang is consumed." This complete arrangement suffers, however, from the smuggling

of ganja into some of the Feudatory States from the States or Agencies in Bengal and Madras. The Political Agent says: "The States of Raigarh, Raira Khol, and Sonpur all complain bitterly of the smuggling into their territories of ganja from the adjoining Bengal States. The reports from the Patna State have been somewhat conflicting. There seems no doubt that there has been in former years considerable ground for a similar complaint here; but it seems that the evil has of late been considerably reduced by improved police arrangements. Both Kalahandi and Bastar complain of smuggling from the Jeypore State in Madras."

Tributary States of Chota Nagpur.

731. In the Chota Nagpur Tributary States, Seraikela and Kharsawan, the cultivation of ganja is prohibited. Ganja is imported from Bengal. There is a contractor in Kharsawan who holds at the same time the monopoly of sale of opium. There are four shops in Seraikela the licenses for which are sometimes sold by auction, and sometimes granted at fixed rates. In the other States there is no very definite system of excise administration in respect of hemp drugs. There are no shops for the sale of the drugs, though one formerly existed in Gangpur and Jashpur, which derived their supplies from the Government gola at Ranchi; and Mr. Grimley, Commissioner of Chota Nagpur, says that he gave a license some months ago to a vendor in the Gangpur State to import ganja, though he cannot definitely say that the shop has been opened yet. Duty on the cultivation of ganja grown by the people for their domestic use is levied in Udaipur, Gangpur, and Bonai. In Gangpur it is 4 annas per plant, and in Bonai 1 anna 6 pies per plant. The amount of the Udaipur duty is not mentioned. In 1883 the Commissioner of Excise, Central Provinces, complained that untaxed ganja from Sirguja, Gangpur, and Udaipur was imported into Sambalpur and Bilaspur; and the Commissioner, Mr. Hewitt, ordered the chiefs not to allow ganja to be grown by any one without their permission, and to keep lists of those who grew ganja and see that they did not grow more than they wanted for their own use, and that no one was allowed to sell ganja. In regard to this order, Mr. Grimley, Commissioner of Chota Nagpur, says: "I am not prepared to say that the Rajas keep the lists prescribed; but I think the spirit of the order is carried out. I think the chiefs are very loyal and willing to do what they are told in regard to such matters."

Tributary States of Orissa.

732. The Tributary States of Orissa have for many years constituted the principal difficulty of the Bengal Government in regard to its excise administration of the hemp drugs.

It was first in 1878 that the attention of Government was seriously directed to the illicit trade from the Tributary States, and apprehensions for the safety of the excise revenue in Orissa were entertained. At this time the existing rules permitted the import into Orissa of Garhjat ganja and bhang under a system of passes and at a fixed duty of one rupee a sér. Four proposals were laid before Government—(1) to entirely prohibit the cultivation of the hemp plant in the Tributary States, or (2) to prohibit the cultivation within three miles of British territory; (3) to prohibit the importation of the drug into British territory, or (4) to raise the duty on imported Garhjat ganja to Rs. 4 a sér, thus equalizing it with the duty on Rajshahi ganja. The second and fourth proposals were adopted: cultivation within three miles of the boundary was prohibited, and the duty on imported ganja was raised to Rs. 4 a sér.

These measures proved ineffectual; and, although the consumption of Rajshahi ganja may have increased somewhat in all three districts of Orissa, it was believed that smuggling still continued to a considerable extent. The policy of total prohibition of cultivation naturally suggested itself again, and in 1884 was carried out in Mohurbhanj, which happened to be under the direct control of the Bengal Government. Rs. 300 a year was given to Mohurbhanj as compensation, and Rajshahi ganja was imported into the State under the ordinary Excise rules.

In June 1882 the importation of Garhjat ganja and bhang into British territory was entirely prohibited, but it was not till 1884 that the prohibition was actually enforced. Further, from the same year (1882) the policy was adopted of levying duty in Orissa on Rajshahi ganja at rates lower than elsewhere in the province. Attempts were also made to entirely suppress cultivation in several of the States with the co-operation of the chiefs, and in 1889 the Superintendent of the Tributary Mahals reported that prohibition had been enforced in eleven of the States, but that the chiefs of four other States objected to the measure.

In 1889 the Bengal Government finally concluded that the experiment of entirely prohibiting cultivation must be abandoned as useless and inefficacious, and that the only way to prevent smuggling was to legalise importation under suitable regulations. Doubts were also entertained as to the real nature of Garhjat ganja. It was suggested that Garhjat ganja in a particular form was looked upon as an absolute necessary of life with certain influential classes in Puri, and that injury might be done by encouraging the use of the strong Rajshahi drug in place of the milder local article. The Government after some hesitation arrived at the distinct conclusion that Garhjat ganja was taken as a drink and not smoked, and that it was " on a different footing altogether from the well known deleterious drug imported from Rajshahi." It was accordingly proposed to legalise the importation of Garhjat ganja at a duty of eight annas a sér (the rate prevailing in Bengal for bhang), and at the same time the orders prohibiting cultivation, whether within the three miles limit or not, were withdrawn.

In 1890, after further consideration and with fuller information on the subject, the Bengal Government altered the opinion they had formed that Garhjat ganja was merely a form of bhang, and arrived at the contrary conclusion, *viz.*, that Garhjat ganja is a true ganja like the Rajshahi article, but inferior, and that it is used for smoking exactly as that drug is. The Government of India were accordingly requested to sanction a duty of Rs. 2-8-0 a sér on Garhjat ganja, which was done.

In December 1890 the orders prohibiting the possession of Garhjat ganja in Orissa were rescinded, and in March 1892 orders regulating its import were issued.

From 1st April 1893 the duty on Garhjat ganja was raised to Rs. 3-8 a sér to assimilate it with a rise in the duty on Rajshahi ganja.

Under existing rules, any licensed wholesale or retail vendor may import Garhjat ganja under a pass from the Collector, for which a fee of Rs. 2 is charged.

The minimum amount which may be imported is one maund at a time. With a view to the prevention of smuggling, the maximum of possession of Garhjat ganja has been reduced from 20 tolas to 5 tolas since May 1892.

Thus the following systems have been in force:—

(1) Prior to 1878 unrestricted cultivation in the Tributary States and legal import into British territory at a duty of one rupee per sér, which was considerably below the duty on Rajshahi ganja.

(2) From 1878 to 1882 suppression of cultivation within a three-mile limit and legal importation at Rs. 4 a sér, *i.e.*, at 8 annas higher than the duty on Rajshahi flat ganja.

(3) From 1882 to 1884 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. The three-mile limit of cultivation was maintained.

(4) From 1884 to 1889 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. Continuance of the three-mile limit of cultivation and attempted total prohibition of cultivation in the Tributary States.

(5) From 1889 to 1890 absolute prohibition of importation of Garhjat ganja, with duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal. Unrestricted cultivation in the Tributary States whether within or beyond the three-mile limit.

(6) From 1890 to 1892 legal importation of Garhjat ganja in quantities not less than 8 maunds at a time, at a duty of Rs. 2-8-0 per sér, which is considerably lower than the duty on Rajshahi ganja. Duty rates on Rajshahi ganja in Orissa lower than those prevailing in the rest of Bengal, and unrestricted cultivation in the Tributary States.

(7) The existing system is the same as (6), except that there has been a rise of duty and a reduction of the minimum of possession of Garhjat ganja with a view to preventing extensive smuggling. The minimum amount of Garhjat ganja which may now be imported at one time is one maund instead of eight maunds. The rates of duty in Orissa from 1st January 1894 are—

	Rs.	A.	P.
Rajshahi ganja—			
Chur	7	8	0
Round ...	6	4	0
Flat	4	8	0
Garhjat ganja ...	3	8	0

Meanwhile the smuggling of Garhjat ganja and bhang continues unabated. This fact is abundantly proved by the evidence.

Remarks on the administration of Orissa Tributary States.

733. There are two points specially noticeable in this summary of the proceedings of the Bengal Government in regard to the hemp drugs of the Tributary States: first, that the policy has undergone several changes; and, secondly, that it has been framed solely with reference to the Orissa Division. In regard to the first of these, the Commission draw attention to the remarks made by Mr. H. G. Cooke, Commissioner of Cuttack, who says: "I believe a persistent policy would soon effect all that is desired. I believe it would be much better to have a persistent policy than a policy of vacillation as in the past, which is perhaps inseparable from a struggle against smuggling." The Commission further think that the matter requires to be approached with more consistent regard to the circumstances and requirements of the States themselves, and the representations of the Central Provinces Administration. And what appears to them to be required is that after full consideration of these conditions, as well as the excise administration of the Orissa Division, the Bengal Government should induce the chiefs of the Tributary States to introduce into their territories such a system of control as will restrict the production of the drug and remove the complaint of smuggling, whether into Orissa or the Central Provinces. That this is not an impossible task may be gathered from the past history of results achieved by the Superintendents of the Tributary Mahals and from the evidence of Messrs. Toynbee, Cooke, and Stevenson. The Commission do not feel called upon to say what the system should be. If prohibition of cultivation be thought the best course, the Tributary States of the Central Provinces furnish an instance of its feasibility. If it is thought best that the States should not be deprived of the local supply, the system generally recommended by the Commission for British provinces would probably be applicable. But it is important that the matter should at length be fully and finally dealt with.

Agency Tracts of Madras.

734. The Agency Tracts of Madras are British territory. That there is a certain amount of smuggling from these tracts into Orissa and the Bastar and Kalahandi States of the Central Provinces admits of no doubt. Whether this ganja is raised in the Agency Tracts or in the plains portion of the Ganjam, Vizagapatam, Godavari, and Kistna districts is perhaps doubtful. There is a considerable production of ganja in all these districts, and there is no evidence before the Commission that the production in the Agency Tracts themselves is large. But the Commission hope that, if control is introduced in the Madras Presidency generally, it will be possible to extend such control to the Agency Tracts. It is true that Mr. Willock, Collector of Vizagapatam, says: "Any interference in the Agency might be productive of political danger"; but he adds: "I am not sure that the extent to which the cultivation is carried on there is such as to render any serious discontent likely." And Mr. Taylor, for 4 years Manager of the Jeypore Estate, says: "There is no need for restriction. But neither, so far as I know, would any privation be caused if restriction were necessary in the interests of other provinces. There would certainly be no privation involved in the prohibition of export. And, so far as I know, there-

would be no privation of a general character involved in the prohibition of the use of the drugs in Jeypore Estate above the ghâts which is in my charge. I think that the introduction of the Government system of licensing sale would meet with no opposition from the people in the estate generally. I would recommend the Government system being introduced experimentally by opening a shop in Jeypore. I think there would be a great difficulty in interfering with the present growth of hemp. It would require an expensive preventive agency." This witness believes that the use of the drug in Jeypore is very limited.

The Commission find it difficult to believe that there will be greater difficulty in dealing with the control of hemp drugs in the Madras Agency Tracts, which are British territory, than in the Tributary States of the Central Provinces, where complete control has been secured, or in those of Bengal, where various measures have from time to time been introduced, though not with complete success. And in all these cases they regard control of cultivation as the object to be aimed at, inasmuch as it is the only satisfactory method of controlling the production and distribution of the drug.

Punjab Native States.

735. As ganja is not produced or used in the Punjab, and charas is an imported article, which will be dealt with before it reaches any of the Natives States of that province, the control of bhang is the only question for consideration in connection with the latter; and this is not a difficult one. For bhang is only cultivated in Bahawalpur, and its sale is controlled. In any further arrangements made in the Punjab for the control of the hemp drugs, the co-operation of the various States may be desirable, but at present there is no need to offer any suggestions. The sale of the drugs is conducted under licenses granted by the States. In the Nabha State it is said that ganja and charas are prohibited.

Madras Native States.

736. In the Natives States under the Madras Government the system is much the same as in the Presidency itself. The introduction of control into the latter will render similar control in the former desirable.

Bombay Native States.

737. The principles of administration in many of the Native States under the Bombay Government are similar to those in British territory; and the conditions as regards growth of the hemp plant and its cultivation are also similar. Sale of the drugs appears to be invariably controlled. Here also any advance in the administration of the hemp drugs in British territory must be accompanied by the co-operation of the States. The mode in which this can be done need not be detailed. It is understood that the Bombay Excise Act has been adopted by many of the States, and it is probable that there will be no difficulty in securing a further development of their system if this is undertaken in British territory.

Khairpur in Sind.

738. The remarks made in paragraph 735 regarding the Punjab States equally apply to the Khairpur State in Sind, where also bhang is grown.

Commission's recommendation in regard to Native States generally.

739. In the foregoing remarks on the excise administration in respect of hemp drugs which exists in the Native States, the Commission have endeavoured to indicate where further control is desirable in the interests of the British administration. They are not in a position to estimate in each case the requirements of the States themselves, or the difficulties which may exist in the way of introducing a more effective system of control. But they have no reason to think that the system which they have recommended for British provinces is not generally applicable to these States, and they would suggest for consideration whether, subject to any special exceptions for which good reason may be alleged, they should not be invited to co-operate with the British Government in adopting that system. It is probable that in these States, as in most of the British provinces, the subject has not received the attention which it deserves, and that they will have no objection to uniting with the British Government in an effort to introduce effective control into this branch of their administration.

CHAPTER XVIII.

SUMMARY.

Conclusions arrived at by the Commission.

740. The following are the conclusions arrived at by the Commission:—

I.—Total prohibition of the cultivation of the hemp plant for narcotics, and of the manufacture, sale, or use of the drugs derived from it, is neither necessary nor expedient in consideration of their ascertained effects, of the prevalence of the habit of using them, of the social and religious feeling on the subject, and of the possibility of its driving the consumers to have recourse to other stimulants or narcotics which may be more deleterious (Chapter XIV, paragraphs 553 to 585).

II.—The policy advocated is one of control and restriction, aimed at suppressing the excessive use and restraining the moderate use within due limits (Chapter XIV, paragraph 586).

III.—The means to be adopted for the attainment of these objects are:

(*a*) adequate taxation (Chapter XIV, paragraph 587);

(*b*) prohibiting cultivation, except under license, and centralizing cultivation (Chapter XVI, paragraphs 636 and 677);

(*c*) limiting the number of shops (Chapter XVI, paragraph 637);

(*d*) limiting the extent of legal possession (Chapter XVI, paragraphs 689 and 690).

IV.—The method adopted should be systematic and as far as possible uniform for the whole of British India, and it is advisable that this method should be suggested for adoption by certain of the Native States (Chapter XIV, paragraphs 588 and 590; Chapter XVI, paragraph 639; and Chapter XVII, paragraph 739).

V.—A Government monopoly of production and sale is not recommended for practical reasons, though there is no theoretical objection to it (Chapter XIV, paragraph 589).

VI.—For the purpose of adequately taxing consumption, the combination of a direct duty with the auction of the privilege of vend is ordinarily the best method (Chapter XVI, paragraphs 634 and 635).

VII. When sufficient provision has been made for restricting consumption of the drugs by the means above detailed, there should be as little interference as possible on the part of the Government with their distribution (Chapter XVI, paragraphs 638, 654, and 678).

VIII.—Import, export, and transport duties are undesirable as obscuring the real issue how far consumption needs to be checked by a rise in duty. But in regard to imports from Native States which have not assimilated their system to that in force in British territory, the levy of import duty may be necessary (Chapter XVI, paragraphs 657 and 670).

741. The above mentioned conclusions embody the general principles and procedure recommended by the Commission. With a view to bringing the systems in different parts of India into harmony with these conclusions and generally improving the administration, the Commission have made the following suggestions :—

Suggestions made by the Commission.

(*a*) That in Bengal Government warehouses for the storage of ganja should be constructed in Rajshahi (Chapter XVI, paragraph 643).

(*b*) That, subject to this addition, the Bengal system of ganja administration should be generally followed in the Central Provinces, Madràs, Bombay, Berar, and possibly in Ajmere and Coorg (Chapter XVI, paragraphs 656, 671, 672, and 673).

(*c*) That in the Central Provinces all ganja should pay a direct duty, whether consumed in the province or exported ; that the rule under which ganja is supplied by wholesale to retail vendors at a fixed price should be abolished ; and that the number of wholesale licenses should be granted more freely and without charge (Chapter XVI, paragraphs 649, 654, and 655).

(*d*) That in the North-Western Provinces the cultivation and manufacture of ganja should be prohibited and the system of bonded warehouses introduced for its storage (Chapter XVI, paragraph 657).

(*e*) That in Madras and Bombay cultivation of the hemp plant should be prohibited except under license, and that the licensed cultivation should be restricted to limited areas ; also that a fixed duty should be imposed on ganja, such supervision of the manufacture and storage of the crop being maintained as is necessary to its imposition (Chapter XVI, paragraphs 662, 669, and 671).

(*f*) That similar measures should be introduced into Berar and possibly Ajmere and Coorg (Chapter XVI, paragraphs 672 and 673).

(*g*) That on all charas imported into the Punjab a duty of not less than Rs. 80 per maund be levied, the drug being stored in bonded warehouses, and duty paid when it is taken out by the vendors. Inter-provincial arrangements regarding the crediting of duty to different provinces to be made under the orders of the Supreme Government (Chapter XVI, paragraphs 674 and 675).

(*h*) That where possible a duty should be levied on bhang. Where refuse ganja is used as bhang, the rate may have to be fixed at a higher figure with reference to this fact (Chapter XVI, paragraph 677).

(*i*) That as a rule separate licenses should be granted for the sale of the different kinds of drugs (Chapter XVI, paragraph 680).

(*j*) That licenses for retail sale should not ordinarily be granted to wholesale dealers (Chapter XVI, paragraph 682).

(*k*) That a separate license should be granted for each shop (Chapter XVI, paragraph 683).

(*l*) That licenses for retail vend should contain a provision prohibiting the vendor from selling the drugs to children or insane persons (Chapter XVI, paragraph 684).

(*m*) That when new shops are proposed, municipal bodies, rural notables, zamindars, or headmen, as the case may be, should be consulted as to the necessity of opening them and as to their location, and that objections, if made, should receive the most careful attention (Chapter XVI, paragraph 688).

(*n*) That the limit of legal possession of the hemp drugs should be the same for the whole of British India, *viz.*—

Ganja and charas, or any preparation or admixture thereof, 5 tolas.

Bhang, or any preparation or admixture thereof, one quarter of a sér.

And that Native States should be invited to adopt this maximum (Chapter XVI, paragraph 690).

Suggestions regarding Burma.

742. As regards the province of Burma, that the sale of ganja to natives of India should be licensed under proper control and taxation where there is a demand for it among such persons, the prohibition of cultivation in Burma, as well as that of the use by the Burmans being maintained (Chapter XVI, paragraph 695).

W. MACKWORTH YOUNG ... *President.*

H. T. OMMANNEY ...
A. H. L. FRASER ...
C. J. H. WARDEN ...
SOSHI SIKHARESWAR ROY ...
HARNAM SINGH, AHLUWALIA...
NIHAL CHAND ...
} *Members.*

6th August 1894.

Raja Soshi Sikhareswar Roy and Lala Nihal Chand sign the report subject to a note of dissent.

W. M. YOUNG.

Note of Dissent by Raja Soshi Sikhareswar Roy from opinions expressed in the Report.

It will be well, I believe, to mention here, before stating the principal points of difference with my colleagues, that I have thought it advisable to keep outside the sphere of my consideration the revenue question connected with the excise administration of the hemp drugs. The reasons for adopting this course are:—

(1) In the instructions to the Commission contained in Government of India Resolution No. 2792-Ex., dated 3rd July 1893, there is no mention of the revenue question.

(2) Looking to the past history of the use of intoxicating drugs in this country during the period of Hindu and Muhammadan rule, and also to the distinct principle laid down by the British Government while taking in hand the control of the use of these drugs, I have been led to think that I would not be justified in taking the question of revenue into my consideration while dealing with the advisability or otherwise of prohibiting the use of the drug.

A short sketch of the past history of the administrative control of intoxicating drugs in India will not be uninteresting if given here.

Manusmriti, or the Institute of Manu, is considered as the highest authority on the Hindu law. In Chapter VII of *Manu* are enumerated the different sources from which in ancient time the sovereigns of the country used to collect revenue from their subjects. No taxes on intoxicants are mentioned therein.

Neither in *Jagnabalka, Brihaspati, Atri Parasara*, or in any other standard work of *Smriti* is there to be found any thing which could show that the custom of imposing taxes on intoxicating articles existed. There is ample proof to show that in ancient India the use of intoxicants was not uncommon. Even in the *Vedas* not only the mention of the word *sura* (spirituous liquor) is found every now and then, but it also appears that the use of *soma* drink—that is, leaves of a kind of plant in the form of an infusion—was very common among the ancient *Rishis.* Whether the *soma* plant bears any resemblance or relationship to the hemp, as has been said by some witnesses (witness No. 69, Central Provinces, and others), or as stated in para. 15 of the report on the cultivation of ganja by Babu Hem Chunder Kerr, is a point on which there is great difference of opinion; but this much is certain that in ancient India there were other intoxicating drinks than wine.* But it was the manufacture and sale of spirituous liquors alone that were prohibited by law. "* * The distillers and sellers of spirituous liquors should be banished from the realm of a king, as they are secret thieves and harass the subjects by their ill deeds."—Chapter IX, *Slokes* 225 and 226 *Manusmriti.*

During the Muhammadan rule in India attempts were made from time to time to impose duty on certain intoxicating beverages, but it is not clear how far the use of intoxicating articles was actually brought under direct control of the governing power. It is not unknown to those who have studied Muhammadan history carefully that the sources of revenue as well as the collection of revenue during the Muhammadan rule reached their highest point under the sovereignty

* "*Sura-panam* is also spoken of besides *soma-panam*—that is, dram-drinking as distinguished from wine drinking; and in the *Satapatha Brahmana*, a son of Tvashtri is represented as having three months, one of which was *soma-drinker*, another *Sura-drinker*, and a third the consumer of other things." Page 21, India: Past and Present, by Mr. Dutt.

of Aurangzeb. In Catrou's *Histoire générale de l'empire du Mogol*, a list is given of the different sources of revenue from different provinces which were under the sovereignty of Aurangzeb. Nothing is to be found in this work which shows that there was any duty imposed on the use of intoxicating articles. On the other hand, an interesting account of his aversion to the very idea of imposing taxes on intoxicating drugs will be found in a Persian book which contains a collection of his letters written by him to his friends and relations. Aurangzeb's grandson proposed to impose a tax on palm juice, a very mild intoxicating beverage which was then in great favour among certain classes of Hindus in Bengal. Aurangzeb's answer in reply to his grandson's proposal was as follows:—

"Though the taxation of the palm may lead to the collection of revenue, yet it is impossible for me to sanction it. I cannot understand what dishonest *mufti* declared it legal to do so. You must know that such ill advisers are enemies of this and the next world. You should thank Almighty who has put you in possession of three provinces which are so full in wealth, and which fill our coffers with so much revenue, and in which everything is so abundant and cheap. You should know as well that the good-will of the subjects is the only wealth for this world and the next." (Letter No. 90.)

Later on, during the closing period of Muhammadan rule, some sort of taxes were imposed on the trade of spirituous liquors in some parts of the country, and it appears that these were collected under the head of *sayer* revenue by the zamindars when the country came under the possession of the East India Company from the hands of the Muhammadan rulers.

In 1789 a cry was raised in some quarters against the conduct of the Bengal zamindars, and it was said that, owing to the want of proper control on the part of the zamindars, the vice of drunkenness was spreading very fast among the lower classes of the people, and it was suggested that the proper remedy of this evil would be for the Government to bring the collection of the duty on spirituous liquor under its direct control and management. Accordingly, on the 19th April 1790, by a general notification the Government decided upon the resumption of the *sayer* on spirituous liquor. This was followed by the Abkari Regulation of the 14th January 1791, the main provisions of which were as follows: "That a tax should be levied on every license granted both to distillers and vendors of spirituous liquors; that the rates of tax on the licenses should be regulated by the local situation of the stills and shops, the quantity of consumption, and selling price; * * * that all private unlicensed stills should be prohibited under penalties."

On the 16th February 1798 the Board of Revenue suggested that a duty be levied on the sale and consumption of (1) madak, (2) ganja, (3) subzi, (4) bhang, (5) majum, (6) banker, and (7) charas. On the 22nd March 1798, the President (the Governor-General in Council) replied as follows: "Some of the articles enumerated in your letter, we have reason to believe, are of so noxious a quality, and produce a species of intoxication so extremely violent, that they cannot be used without imminent danger to the individual as well as to the public who may be exposed to the effects of the temporary insanity frequently excited by the use of these drugs. We are of opinion that the vend of any drugs of this

description should be altogether prohibited, and we desire therefore that, after having made an inquiry, with a view to ascertain more particularly the nature and effect of them, you will prepare and submit to us a regulation for this purpose, as well as for establishing such duties as may appear to you proper on the sale of such other drugs as may be used without the same pernicious effects."

The Board of Revenue made inquiries under the above order, and arrived at the conclusion that tobacco, opium, ganja, bhang or subzi, banker, and toddy are not for the most part represented as producing any very violent and dangerous effects of intoxication except when taken to excess, and that they appear to be useful either as medicine or otherwise. For these reasons the Board of Revenue thought it advisable to recommend that the sale of any of these articles should not be altogether prohibited, but that in order to restrict their use a tax should be imposed on them.

Accordingly unlicensed sale of ganja and other intoxicating drugs was prohibited, and a daily rate of duty on the sale of ganja and other intoxicating drugs according to their strength and quantities was imposed on them by Regulation VI of 1800. In 1853 the system of daily tax on intoxicating drugs was abolished, and in its place a duty at Re. 1 per ser on ganja and charas was imposed. In 1860 a fixed fee of Rs. 4 per maund was prescribed for each ganja license in addition to the above fixed duty. In 1876 the present system of annually selling by auction the retail licenses was introduced. On the 29th April 1875 the Government of India addressed a letter to the Government of Bengal, in which it observed that "nothing should be done to place temptation in the way of the people that can possibly be avoided." It was also stated: "His Honour the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja; and indeed if the use of the drug could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

In 1871 Sir Richard Temple, while he was Financial Member of the Government of India, drew the attention of the Government to a note, dated 15th July 1870, by Mr. Chapman, the Financial Secretary, in which he made an observation to the effect "that every lunatic asylum report was full of instances of insanity and crime due to the use of ganja." The result was that Local Governments were directed by the Government of India to make a thorough investigation in regard to the effects of the use or abuse of the several preparations of hemp. Mr. Hume, then Secretary to the Government of India, in his letter No. 339, dated 10th October 1871, wrote to all Local Governments and Administrations as follows: "It has frequently been alleged that the abuse of ganja produces insanity and other dangerous effects. The information available in support of these allegations is avowedly imperfect, and it does not appear that the attention of the officers in charge of lunatic asylums has been systematically directed to ascertain the extent to which the use of the drug produces insanity. But as it is desirable to make a complete and careful inquiry into the matter, the Governor-General in Council requests that, with the permission of His Honour the

Lieutenant-Governor, you will be so good as to cause such investigations as are feasible to be carried out in regard to the effects of the use or abuse of the several preparations of hemp. The inquiry should not be simply medical, but should include the alleged influence of ganja and bhang in exciting to violent crime."

The result of this investigation was embodied in a Resolution by the Government of India, dated 17th December 1873, and it was decided by the Government that the cultivation and consumption of ganja should be absolutely prohibited in British Burma, and that restrictions should be imposed on the cultivation, possession, and sale of ganja in the Central Provinces, the Chief Commissioner of which suggested the adoption of such a course on the ground that "the consumption of drugs has of late years materially increased in the Central Provinces, and fears have been expressed by district officers that since the introduction of the public central distillery system and the consequent rise in the price of spirits, many people who formerly drank spirits have taken to drugs as a substitute." The Local Governments of other provinces and presidencies were not in favour of altering existing arrangements, so the Government of India did not press them for the adoption of any restrictive measures of a stringent character, although in the concluding portion of the Resolution the wish of the Government to discourage the use of ganja was expressed in a general way in the following words: "His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices."

In July 1891, Mr. Mark Stewart, M.P., in the House of Commons, drew the attention of the Secretary of State for India to a statement which appeared in some Indian paper regarding the injurious effect of ganja, and requested him to call the attention of the Government of India to the desirability of extending the same prohibition as adopted for Burma to the other provinces of British India. The Right Honourable the Secretary of State for India accordingly, in his despatch dated 6th August 1892, requested from the Government of India an expression of its views on the effects of this drug, and asked if the Government of India would propose to take any further steps for restricting the consumption. The Government of India in reply wrote a letter to the Secretary of State on the 9th August 1892, in paragraph 3 of which it admitted the injurious effects of the drug in the following words: "We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India. But, even if the absolute prohibition of the use of the drug could be enforced, the result might be to induce the use of still more noxious drugs. India abounds with plants, growing wild, from which drugs can be procured which are more deleterious in their effects than ganja............ But although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognise it as our duty to restrict its consumption as far as practicable, and we have distinctly laid down the policy to be pursued in respect of this drug in our Resolution of the 17th December 1873 already quoted."

It will be seen from the above sketch that the use of intoxicating drugs was not uncommon in ancient India, but the restrictive measures adopted in those times differed from those now existing, inasmuch as the attempt then made to restrict the use of spirituous liquors was not by imposition of taxes as is done now, but by disallowing the sale and manufacture under some severe penalty. In the latter portion of the Muhammadan rule, however, some sort of duty was imposed on vend of spirituous liquors, but it did very little to check their spread. The history of the control of the use of the intoxicating drugs during the last century under the British rule will show most clearly that although the Government is trying its best to check their spread by adopting various restrictive measures from time to time, yet the result is not always satisfactory to the Government itself. It will also show that the Government is fully aware of the injurious effects caused by the use of these drugs, and that it is ready to prohibit their sale, manufacture, and importation if only it is fully convinced of the practicability of the measure. With this view, and to estimate aright the exact measure of the injury done to the people at large by the use of these deleterious drugs, Government caused inquiries to be instituted from time to time. But, failing to come to any satisfactory conclusion, the Government has been pleased to appoint the present Commission to institute further inquiries concerning the subject.

To obtain exact knowledge of the subject of their inquiry, the Commission directed their attention to the following five principal methods for eliciting information :—

(1) By examining witnesses from various provinces.

(2) By examination of cases attributed to hemp drugs in lunatic asylums.

(3) By causing scientific investigation to be made in regard to physiological action of hemp drugs, etc.

(4) By reading official records and current literature bearing on the subject.

(5) By personal observation of the habits and condition of the consumers of these drugs in various parts of India.

With regard to (1), all the members of the Commission as a body had opportunity of judging for themselves the value of the evidence taken before them. The inquiry (2) was conducted by a Sub-Committee consisting of two members of the Commission, while (3) scientific investigation was conducted not by any member of the Commission nor in their presence, but by a medical man at the request of the Commission.

As regards evidence of witnesses, it will be well to mention here the difficulties and disadvantages which the members have had to work under for the following reasons :—

(1) The subject of inquiry was not of such a nature as to induce men of educated classes or well-to-do people of native society to take any special interest in it, so I think it can be safely said that the bulk of our witnesses had very little practical knowledge or personal observation of their own regarding the subject-matter of our inquiry, and this fact is borne out in many instances by their own statements.

(2) The time available for answering the long series of questions framed by the Commission was in the majority of cases not sufficient for the witnesses to make a thorough study of the subject in all its bearings.

(3) For the reasons abovementioned, most of the witnesses have had to depend mainly on hearsay statements of other people—a fact which in many instances was admitted in their answers.

(4) The Commission tried to get information from the people who have special knowledge of the subject, but those people, having no knowledge of English, answered the questions from a translation sent to them which was not always very accurate, as will be seen from paragraph 105 of the report. The evidence thus obtained also got distorted in some cases by re-translation. This fact was elicited in some cases when they were orally examined, and of course the mistakes of the translation were at once corrected. But for those who were not orally examined it is difficult to say how far their papers are still open to correction, as they have not had any opportunity of reading their answers in print.

(5) The three drugs—ganja, charas, and bhang—having been grouped together in one and the same question, the witnesses in many cases made a confusion in their answers,—a fact which was brought to light at the time when some of them were orally examined.

(6) The evidence in all cases was not noted down in the exact words of the witnesses while orally examined, the substance of their statements having been recorded in the writer's own language. The fact also that the portion of the answers was not put side by side with the corresponding questions put to the witnesses goes to diminish the value of such evidence to some extent.

(7) In some cases the witnesses were prejudiced in answering the Commission's questions on account of their holding a wrong notion of the object of the Commission's present inquiry. This fact came to my knowledge from casual remarks of some of the witnesses as well as of other people in different places where opportunities were placed before them to express their free opinion. A remark which was made by one of the high officials of the Indore State at one of the sittings of the Commission there also shows that in many places people misunderstood the motive of the present inquiry.

(8) The other disadvantages under which the members had to work need not be mentioned here in detail, as they may be seen from the proceedings book of the Commission.

Although there are thus some disadvantages and difficulties above indicated, yet the evidence of so large a number of witnesses examined by the Commission cannot fail to throw some light which will assist in coming to a general conclusion.

It would not be difficult to quote from the evidence before us any amount of opinion either in favour of ganja to show that its use is not injurious, or against the use of ganja to prove that it is highly deleterious and most harmful; so, without attempting to quote individual opinions, I will be content with showing in a general way their views on the subject matter of our inquiry.

The following is an analysis of the opinion of witnesses on the question of injurious effects of the hemp drugs :—

Province.	GANJA.			CHARAS.		
	DELETERIOUS.		Not deleterious.	DELETERIOUS.		Not deleterious.
	Excessive.	Moderate.		Excessive.	Moderate.	
Bengal ...	107	83	13	63	50	9
Assam ...	14	21	2	10	17	2
North-Western Provinces and Oudh.	38	64	6	42	66	3
Central Provinces	33	28	3	17	13	2
Bombay ...	51	34	2	32	23	2
Madras ...	34	57	17	34	53	17
Punjab ...	...	...	...	...	...	...
Sind ...	...	...	...	...	...	...

A careful examination of the statements of witnesses will show that an overwhelming majority of the superior medical officers are of opinion that the hemp drugs are very deleterious in their effects (some even go so far as to say that they are so even when used moderately), and that their excessive use brings on insanity and other diseases. The large number of executive officers, while generally agreeing in the view that the use of these drugs is not so injurious in their effect as above described, have proposed at the same time that the duty at present levied on them should be raised. The consensus of opinion among most of the witnesses belonging to the orthodox Hindoo class is that the use of bhang is connected with the social and religious customs of the people, but it would be well to point out here that a very few of them consider such customs as absolutely essential. The opinion of some of the Muhammadan and European witnesses is that the use is essential. The enlightened portion of the native community who were invited to give evidence generally share in the view that these drugs are injurious, and that their use may be prohibited. The reason for this diversity of opinion is not far to seek. On the one hand, the patriots and philanthropists in their excessive zeal for the welfare of the people are generally apt to magnify the existing evils which corrode society, however small they may appear to the naked eye ; while, on the other hand, another class, with a view to serve the interests of the State, generally make the evils appear very much smaller, like things seen through the wrong end of the binocular glass, forgetting that the interest of the Government could be best served by serving the interest of the people.

About the examination of cases admitted to the lunatic asylums where the cause of insanity was attributed to hemp drugs, it may be said that the Commission's inquiry extended over a period of one year, namely, 1892, and the conclusion arrived at, however correct it may be for that year, cannot perhaps be

accepted as general. What leads me to form this opinion is that the nature of the evidence on which the Sub-Committee based its decision is in some instances of a very contradictory and unreliable nature. In this connection my suggestion would be that the statistics of such cases for the next succeeding three years may be taken, and the local officers be impressed with the necessity of taking down correct notes of the nature of insanity, its causes, &c., after thorough examination.

I think I need hardly say anything more on the physiological action of hemp drugs than by quoting the following from Dr. Cunningham's report, which proves that the investigation is not yet complete:—

"The results of this were as follows, in so far as mere casual naked-eye inspection goes; for I have already pointed out the detailed histological examination of the condition of the various organs and tissues is a matter not of a few hours, but of many weeks' work; so that it has been impossible for me to carry it out and at the same time to meet the wish of the Commission for the immediate submission of a report. Specimens of all the more important organs have, however, been carefully preserved, and will form the subjects of detailed histological examination hereafter."

The principal recommendation of the Commission is that, in order to restrict the use of these drugs, a high rate of duty should be imposed on them. Considering the peculiar condition of this country and its population, I do not think the doctrine of restricting the use of intoxicants by introducing a gradual increased rate of duty on their trade could be accepted as a very sound one. The past history of the excise administration of the country will show clearly that such measures, although adopted from time to time, were not of much avail. To prove this it would be necessary either to point to facts and figures in official reports or to quote public opinions. If it is possible to find accurate figures of area under cultivation or actual quantities of production of the intoxicating drugs for a series of years, the actual increase or decrease of the use of the drugs could be inferred from an examination and comparison of those figures. The following extract from a letter of the Government of Bengal to the Board of Revenue will show that the Government itself has very little confidence on the statistical tables prepared in the Excise Department:—

"The Lieutenant-Governor has had an opportunity of visiting Nowgong and of personally inspecting the Ganja Department at the place; and from inquiries made by him on the spot, it appears to him that the widest opportunities for fraud and smuggling exist, though no proof has ever been adduced of detected smuggling of ganja on an extensive scale. The cultivated area is never measured. The result therefore at the end is entirely speculative and uncertain."

The Acting Secretary to the Madras Board of Revenue in the Department of Separate Revenue in his letter No. 1839-Mis., dated 1st May 1894, says: "Accurate figures are nowhere available, as no accounts are maintained respecting the cultivation of the plant." Such is the case with every province. Nowhere accurate figures regarding the cultivation or production of ganja are available. However, if we are to depend on the reports of the Excise Department, it will be seen from an examination of these statistical tables that, notwithstanding a continuous raising of duties on ganja, its cultivation and trade are

markedly on the increase. The rates of fixed duty have been raised in Bengal from time to time. For the sake of convenience I will divide the twenty years from 1874 to 1893 into as many periods as the rates of duty on the drugs were increased and give an average of areas under cultivation, etc., for each period. In this manner their effect on the spread of cultivation and trade of the drug will be seen most clearly. In five years from 1872 to 1878 the rate of duty on "best "quality of ganja was Rs. 4, the area under cultivation 1,978 bighas, sale 7,800 maunds, import 830 maunds, and revenue Rs. 11,67,829. In the next four years from 1879 to 1882 the rate of duty on round ganja increased a little, the area under cultivation was 1,982 bighas, sale 5,657 maunds, import 879 maunds, and revenue Rs. 14,51,088. In the next five years from 1883 to 1887, rate of duty Rs. 5, area under cultivation 2,010 bighas, sale 5,861 maunds, import 1,416 maunds, and revenue Rs. 19,68,822. In the next three years ending 1890, rate of duty Rs. 7, area under cultivation 2,207 bighas, sale 6,354 maunds, import 1,713 maunds, and revenue Rs. 22,74,354. In the next three years from 1890 to 1893, rate of duty Rs. 8, area under cultivation 2,509 bighas, sale 5,741 maunds, import 1,571 maunds, and revenue Rs. 23,30,106. It will be seen from the last year's report that the area under cultivation was no less than 3,540 bighas in 1892-93.

I think it would be well to see what the statements of the witnesses prove regarding the spread of the use of hemp drugs. No. 1 Bengal witness, Mr. D. R. Lyall, Member of the Board of Revenue, in charge of Excise in Bengal, says in reply to Question No. 25: "The consumption of ganja varies little." Mr. E. Westmacott (Witness No. 2), late Commissioner of Excise in Bengal, says: "I doubt there being either increase or decrease. If smuggling were completely stopped, figures of consumption would undoubtedly go up." Mr. William Colebrook Taylor (36), Special Deputy Collector, Orissa, says: "The use of ganja is said to be on the increase. Cannot give reasons except that the existence of so many ganja shops must have a tendency to attract consumers and increase the consumption." Mr. A. C. Tute, Collector of Dinajpur, witness No. 12, says: "The use of ganja is on the increase. The reason for increase in consumption here is that the people of this district show a liking to ganja in preference to drink." Witness No. 166, Ray Radhagobind Roy Sahib, Zamindar of the same district, says: "The use of ganja is on the increase." Witness No. 92, Mr. W. R. Rickets, Manager of Nilgiri State, Orissa, says: "I should say the use of bhang and ganja is decidedly on the increase." Witness No. 80, Babu Hem Chunder Kerr, the Deputy Collector of Alipur, and the well-known author of the valuable report on ganja, says: "With increase of duty smuggling becomes more rife (*vide* my Report, page 153). The first improvement that I would suggest will be the reduction of the duty levied on ganja, which has been raised rather too high."

In the North-Western Provinces the increase in the use of hemp drugs is not less marked than in Bengal. Mr. Stoker, the Excise Commissioner of North-Western Provinces, in paragraph 42 of his memorandum says: "In the twenty years since 1873 the receipts have grown from Rs. 4,07,822 to Rs. 7,06,788, or over 73 per cent. In Oudh the increase has been over 193 per cent., and in the North-Western Provinces it has been 50 per cent." For this increase he has assigned three causes, one of which is "an increased use of hemp drugs."

In Punjab the Financial Commissioner's letter, dated 6th October 1891, contains the following: "So far as statistics are available, the revenue derived from

the Punjab from the hemp drugs has remained practically stationary for several years. * * * The probabilities are all in favour of increased consumption."

A careful examination of Excise reports and statements of witnesses in other provinces will show that the use of hemp drugs is spreading in the same way everywhere, and, wherever it will be found otherwise, the cause may be easily traced to the spread of the use of spirituous liquors. The question of the spread of the use of hemp drugs is so much intermixed with that of opium and spirituous liquors that it is not at all convenient for anybody to deal with the one kind of intoxicating article alone, keeping the others outside the sphere of consideration. The principle of restricting and controlling the spread of intoxicating articles by imposing high rates of duty has been applied to all, but notwithstanding this the use of every kind of intoxicant is on the increase. Attempt has been made from time to time to explain away this increase of intemperance as well as the revenue derived from the use of intoxicating articles in India by officials of the highest position and experience by bringing forth the argument that it is the result of the improvement in the condition of the people. Sir J. Strachey in page 30 of his admirable work, " Finances and Public Works of India," says : " This increase of 50 per cent. in the last twelve years is not to be attributed to the increase of intemperance, but to improvement in the condition of the people, and, still more, to better administration."

Sir Richard Temple in his " India in 1880 " says: " The sight of this may give to some observers the impression that under British rule drinking prevails more than under Native rule. Wider observation will, however, prove that the Indians, if judged by the standard of advanced nations, are sober and temperate in the main, and that, despite any defects which may still lurk in the excise system, the British taxes do operate as some check upon insobriety."

Probably nowhere this line of reasoning was more clearly and effectively put before the public than in a Parliamentary Report on " Intemperance " prepared by a Select Committee of the House of Lords. It is stated in that paper: " This increase of expenditure cannot by itself be taken as a proof that drunkenness has increased in the same ratio. It is probable that a large portion represents the moderate consumption by the temperate. With increasing incomes the spending power of all classes has grown, and a higher scale of comfort has been gradually introduced. Just as the consumption of meat has increased, so has that of intoxicating liquors ; but in neither of these cases does the increased general consumption necessarily imply a proportionate excess on the part of individuals. Further, it has been shown that the use of tea, sugar, wine, and tobacco has increased far more rapidly than the use of spirits or beer."

Whatever may be the cause of the increase, in this country at least it is believed by many the use of the intoxicating drugs is spreading very fast. An experienced officer of the executive line in Bengal, Mr. Dutt, Deputy Magistrate, in page 276 of his book " India : Past and Present " says : " The vice of drunkenness has been most alarmingly increasing in the country since the introduction of British rule in it. Of course the raising of the excise duties would necessitate the raising of the import duties on foreign liquor, as otherwise the result would be to displace Native liquor for European ; and it is here that the shoe really pinches, for the Europeans in India, and possibly the higher classes of the Natives also, are apt to object

strenuously to any check being placed on the admission of European liquors into the country."

These few lines will show how keenly some of the educated natives of the country feel for the spread of the use of spirituous liquors and other intoxicating drugs among the people, and how necessary it is to find out some effective means which might arrest their further progress. The simple course of raising the rate of duty from time to time to check their spread has not proved of much avail up to this time. On the other hand, I believe the rates of duty on some of the intoxicating articles have already reached their highest point, and, instead of checking the spread of their use, do harm to society by fostering smuggling and crimes. In my humble opinion, adoption of an opposite course in the shape of gradual reduction of duties on some of the intoxicating articles, with a judicious arrangement for supplying the consumers of the drugs with the least injurious kind of intoxicants, may in a great extent help to fulfil the wish which the Government has at heart.

Sometimes judicious reduction of the duty on articles of consumption, such as drinks or beverages, has proved far more beneficial than the adoption of restrictive measure in the shape of imposing increased duty. To prove this, instances abound in the history of England as well as of other European countries. As an instance, I may mention here the case of tea. In the last century, when the use of tea spread in an astonishing way all over England, and when the traders in tea used to mix with it "great quantities of sloe leaves, liquorice leaves, leaves of other trees, shrubs, or plants, clay, logwood, and other ingredients," which were detrimental to the health of the people, Government with the help of legislation attempted several times to repress the *sophisticating of tea*, as these operations of the false tea-makers were termed. But such measures always proved quite ineffectual. A very stringent Act was passed in 1777 to repress this practice, but it also did very little good. At last, in 1784, a wise measure was adopted by Pitt, and a considerable reduction in the duty on the tea cheapened its price and repressed smuggling.

It would not be improper to see here how far the quite different line of method which the Government adopted to arrest the progress of hemp drugs in Burma has proved successful.

The following extracts will show that the prohibition of the sale and manufacture of ganja in Burma has proved of some benefit to the country :—

Mr. Bayne, Secretary to the Chief Commissioner, in his letter dated 2nd November 1893, says : "No one in Burma desires any change in the Excise law as far as intoxicating drugs are concerned." The Commissioner of the Tenasserim Division, in his letter dated 30th January 1894, addressed to the Financial Commissioner, says : "The effect of the prohibitory system has undoubtedly been to render it somewhat difficult and dangerous for any one to possess the drug, and this must have very largely tended to keep it out of the hands of Burmans. In my opinion, if this system had not been adopted, the result would have been disastrous. Burmans would very certainly have taken to use ganja, for which they have no desire, and, from their national character, those who took to it would have used it to excess, as is the case with opium, which taken in moderate doses does no

harm. Were the consumption and even possession of ganja not prohibited, the effects would be terrible." In his memorandum dated 1st June 1893, Mr. Culloden, Superintendent of Preventive Service, says: "Ganja has always been considered a prohibited drug in Burma. The prohibition of its importation has so far been successful that the drug has been kept out of the local market to a considerable extent; this is proved by the fact that, whenever traced to any one possessing it, only a very small quantity of the drug has been found on them." The Deputy Commissioner, Akyab, in paragraph 3 of his letter dated 1st December 1893, says: "The system of prohibition has on the whole been successful." The Deputy Commissioner of Toungoo, in his letter dated 12th January 1894, says: "In my opinion the system of prohibiting ganja in Burma has been to a very large extent, though not entirely, successful." The Commissioner of the Southern Division, in his letter dated 16th January 1894, says: "As far as my experience goes, the system of prohibition of ganja has worked well. This is based on my experience in different places." Major Eyre (Witness No. 12) in his evidence says: "The total prohibition now in force is absolutely necessary. Were the use of the drug to be sanctioned, the spread of the habit would be great and the results lamentable." Mr. Courneuve (Witness No. 14) says: "The absolute prohibition of the production and consumption of ganja has had the best results, and cannot be improved upon."

Consideration of all these leads me to come to a conclusion which is not quite in agreement with that of my colleagues. I believe that the injurious effects of the hemp drugs are greater and their use more harmful than one would naturally suppose to be the case after reading the concluding portion of Chapter XIII of our Report, although I think I should say that the facts elicited by our inquiry do not go to support the extreme opinion held by some well-intentioned people that these drugs in all their forms and in every case are highly pernicious in their effects. We have seen in almost all parts of India people connected with temples and *maths*, who are quite healthy, strong, and stout, who excessively indulge in bhang. Instances were not rare in which habitual ganja smokers were seen to be quite healthy and strong. It is among the very poor and the mendicant classes that shocking instances of human wrecks caused by over-indulgence in hemp drugs can be found. The general opinion that I have been able to form is that ganja and charas are no doubt injurious in their action on the constitution of certain people, especially those who are weak and underfed, even when they are taken in comparatively moderate doses, and only for a short time. When they are consumed in excess and continuously for a long time, their effects are undoubtedly most ruinous. It should be remembered that it is the men of the poorest class generally, who cannot afford to pay for the luxury of spirituous drinks, who take to the use of ganja. It is also a fact that men who are naturally weak, and who suffer from some sort of bodily or mental indisposition or discomfort, to obtain temporary relief generally indulge in ganja, at first in medicinal doses, and then gradually turn to be excessive consumers of the drug. This accounts for the fact why so large a number of the consumers of the drugs are often found to be in a most deplorable condition. On the whole, therefore, I am inclined to believe that the prohibition of the use of ganja and charas would be a source of benefit to the people.

The following chief difficulties are generally alleged in the way of total prohibition :—

(1) Probability of the consumers taking to the use of more deleterious drugs.

(2) Wild growth of hemp plant.

(3) Religious consideration.

It is said that the prohibition of the use of ganja and charas might lead the consumers to take to more deleterious and worse substitutes, such as dhatura, arsenic, etc. It should be noted that out of 1,193 witnesses, probably not more than twenty of the non-officials have shared this view. No doubt some of the consumers of ganja and charas will take to the use of spirituous liquor and some may go to opium, but at the same time it is reasonable to believe that a large number of them will not go to either. The reason is that fakirs and bairagis, who are the largest consumers of the hemp drugs, cannot on religious grounds resort to spirituous drink. It is stated by many witnesses that opium is distasteful to the consumers of ganja. Even supposing some of them go to *toddy*, *pachai*, weak country spirits, or even moderate doses of opium, the proofs are wanting to show that these forms of intoxicants are worse in their effects than ganja and charas smoking. Besides, if one of the forms of the hemp drugs—bhang,—which is considered least injurious, is left untouched by the prohibitory measure of the Government, consumers of ganja or charas will get in it a substitute, though weak in intoxicating strength. So I do not think there is much ground for the fear entertained by some that the stronger poisons, such as dhatura, arsenic, etc., might be substituted for any of these drugs.

It will be seen from the map showing the spontaneous growth of the hemp plant appended to the Report that such growth is only confined to the Himalayas, and portions of the plains adjoining it. In Southern India occasional growth of the plants may be found here and there, but not even to the same extent as they can be found in Burma. If notwithstanding this the system of prohibition was thought feasible in Burma, there seems hardly to be any reason for not extending the same at least to Southern India.

In Chapter II (on Natural History of the Hemp Plant) of the Report it is stated :

"The evidence of botanists, therefore, may be taken to exclude India from the area of indigenous growth, and it will be seen that the direct enquiries of the Commission tend to confirm this view."

In the memorandum of the Bengal Excise Commissioner, paragraph 6, it is stated : "The wild hemp plant is found in nearly every district, and it grows abundantly in several places. No ganja or charas is made from the wild plant, as the narcotic element which is essential to the production of either drug is entirely absent or very imperfectly developed in the uncultivated plant." The Excise Commissioner of the Central Provinces, in paragraph 57 of his memorandum, says : "It is believed that the hemp plant does not grow wild in any part of those provinces."

The Excise Commissioner of Assam in his evidence in reply to our question No. 7 says: "I think there is no such thing as wild ganja. It does not grow of itself like other weeds." Statements of this nature abound in excise memoranda and other records.

Further, in paragraph 665 of Chapter XVI of the Report it is stated: "That the ganja derived from such spontaneous growth, untended and unimproved, is so inferior as to obviate all likelihood of its competing with the cultivated ganja."

The fact, therefore, that the plants are found only in certain parts of the country and not all over it shows that the objection on this score is not very tenable, and that there is hardly any likelihood of the flowering tops produced by the uncared for hemp plants being ever substituted for cultivated ganja. As regards charas, it being imported from foreign country, the spontaneous growth of hemp plant does not affect the question of its prohibition.

In Chapter IX of the Report it has been proved that charas has no connection whatever with any religious observances of any sect of people in India. It would also appear that the use of ganja in this connection is not so widespread as that of bhang. A careful examination of the statements of witnesses will show that the use is confined to a very small circle of people, and even that use cannot be considered as essential, as it is not sanctioned by any religious authority.

A very few witnesses, and these mainly from Bengal, mention that the smoking of ganja is connected with religious customs of the people. The majority of these refer to a mode of worship called Trinath Mela, which is in vogue in the Eastern part of Bengal and in some portion of Assam adjoining East Bengal. It would not be out of place here to state in brief the origin of this form of worship, and how far the use of ganja is really connected with it, and the connection of Trinath itself with the Hindu Trinity.

Major Moore in his "Hindu Pantheon," says: "In mythology *Brahma* is the creator, *Vishnu* the preserver, and *Siva* the destroyer; in metaphysics the first is matter, the second spirit, and the third time; and in natural philosophy, earth, water, and fire respectively." Perhaps it was with the object of bringing about a sort of reconciliation as it were among the different sects of Hindus who worship their god in these three different principles that one Babu Annada Chandra, a Varendro Brahmin of Dacca District, probably following the examples of Ram Sing of the Punjab or Ghasi Das of the Central Provinces, first started this new mode of worship in 1869 somewhere near his native village, this deity being termed "Trinath," or three in one. To popularize this mode of worship among the rural population, he himself composed a few stanzas of song in colloquial Bengali, which are sung instead of the usual citation of Sanskrit *Muntras*, while the worshippers of Trinath join together in performing the *Puja*. In these songs there is to be found only the mention of the word siddhi, *i.e.*, bhang and not ganja. The originator of this mode of worship, himself being addicted to the use of ganja, it was natural that his followers would follow his example and offer ganja to their god while worshipping him. That the use of ganja is not essential in this mode of worship can be ascertained from the fact that the ladies of the family are allowed to join with the male members in the worship, and it is known to every

body that women in Bengal as well as in other parts of the country, with the exception of those who publicly lead a disreputable life, never indulge in ganja or charas smoking.

Bengal witness No. 63, Babu Abhilas Chandra Mukharji, in his detailed note on *Trinatha Puja*, writes: "Ganja can be consumed by all in the name of a god, and the practice cannot be looked down upon, because it is done under certain forms and religious ceremonies." He concludes his paper saying: "The worship is on the decline. It is almost dying out among the educated *bhadrolokes*; but among the masses it still exists." So from these it appears that ganja or bhang is offered to *Trinath*, but its consumption is not essentially a part of the religious ceremonies to be observed in connection with this mode of worship.

It is to be greatly regretted that the class of men, such as *pandits*, *mohunts*, *gossains*, *gurus*, and priests, on whose statements reliance could be placed in matters connected with Hindu religion, and whose opinions could be accepted as authoritative, are almost totally wanting in the lists of gentlemen who have been asked to answer our questions. Out of 264 witnesses in the North-Western Provinces, only one *mohunt* is to be found, and that witness (No. 242, North-Western Provinces, Mohunt Kishoram Rai) says in answer to our inquiry if the use of ganja is considered essential in religious observances of Hindus: "There is no religious injunction to take the drugs. The rule has been invented by the consumers. The drugs are taken in connection with the worship of Mahadeo with the idea of becoming naked like the god, and regardless of earthly things."

Witness No. 239, Lala Balmukand, Governor, Arya Samaj, says: "No customs, social or religious, sanction the use of ganja and charas. Bhang is regarded as the favourite drink of Siva (deity), and is used on the occasions of the festivals over which he presides, *e.g.*, Shivratri, the anniversary of Siva's marriage; but the use of the drugs is not regarded as essential. It is generally temperate. It is not likely to lead to the formation of the habit, nor is otherwise injurious."

Witness No. 240, Priest Kashi Prosad Panda, of Mirzapur, says: "There is no religious view to support the use of these:"

In the Madras Presidency, out of 193 there are only 3 witnesses who either belong to the priest class or are connected with the management of Hindu temples. Witness No. 191, Samdasu Bavaji, priest of the Mutt of Sri Jagannadha Swamy, says: "The use of ganja is not considered as an essential to social or religious customs as some say." No. 192, Baldev Das, priest of Hanuman Mutt, says: "Some think it necessary for religious thoughts. Those who consume it for religious purposes use it moderately." Then, in answer to our question No. 34, he says: "It would be well to stop it, though it would be somewhat difficult to the habitual consumers." Witness No. 127, Raja of Ramnad, the head of Rameswar temple, one of the four great temples of India, says: "I am not aware of any custom, social or religious, with which the consumption of the drug is associated."

In the Bombay Presidency the only witness, Sewak Lall Sarsondas (No. 109), who is connected with a religious institution called "Arya Samaj," says: "The Arya Samaj fully sympathises with the objects of the Commission referred to, as

the principles and tenets of the Samaj enjoin on its members total abstinence from all kinds of intoxicating drugs."

In the Punjab two religious associations only have favoured us with their opinions. The "Sanatan Dharma Sava," of orthodox Hindus, says: "The beverage of bhang is sacred to the Siva, and in certain forms of worship is considered indispensable by certain classes of the votaries of Siva." "Arya Samaj," of Dera Ismail Khan, sent us copies of their resolutions, which are as follows: "That, in the opinion of this Samaj, the system in force in the Punjab regarding the preparation and sale of ganja and other hemp drugs is most defective, inasmuch as it affords facility for their consumption which deteriorates mental capacities and the health of the consumers;" (2) "that this Samaj is of opinion that the sale of the hemp drugs should be restricted to the medical profession for medical purposes, and the preparation be so restricted as to meet the said wants only."

In Bengal, Assam, Sind, and the Central Provinces there are none among the witnesses who belong to the Hindu priest or mohunt class.

The total number of witnesses who simply state that the use of ganja is connected with the religious customs of the people are in Bengal 96, Assam 9, North-Western Provinces and Oudh 74, Punjab 27, Central Provinces 28, Madras 36, Bombay 38, Sind 12, and Burma 2. Those who consider the observance of these customs essential are 55 in Bengal, 10 in Assam, 23 in North-Western Provinces and Oudh, 9 in Punjab, 11 in the Central Provinces, 13 in Madras, 6 in Bombay, 2 in Sind, and 1 in Burma; while the number of witnesses who state that there are no such customs prevalent are 55 in Bengal, 8 in Assam, 114 in the North-Western Provinces and Oudh, 25 in the Punjab, 24 in the Central Provinces, 78 in Madras, 30 in Bombay, 15 in Sind, and 8 in Burma.

It has been alleged that the use of ganja among religious mendicants who are constantly exposed to sun and rain has beneficial effects. The objects with which it is used by these classes of people are mainly twofold—(1) to produce intoxication, and (2) to generate heat. Apart from its intoxicating effects, if the generation of the heat in the system be one of the objects which the consumers have in view, I think it would not be altogether out of place to mention here that the abolition of the drug is not likely to cause them any hardship, as in that case its place can be supplied by an innocent root called Durba (*Cynodon dactylon*), which is very common, and which grows throughout India. This root, if smoked in a chillum, has the wonderful effect of generating heat in the system, while at the same time the unpleasantness caused by the intoxicating power of the latter can be avoided.

Charas is very deleterious, and the use of this form of the drug is highly in disrepute. It has no connection whatever with religious and social customs of the people; and, as it is imported from foreign country, it is quite feasible to prohibit its importation. I therefore recommend the prohibition of its manufacture, importation, and sale. With a view to save the persons connected with the manufacture and trade of charas from suffering any pecuniary loss, and the

habitual consumers of charas from the inconvenience of sudden deprivation of the use of the drug, it would be advisable to give sufficient notice and allow a time before the adoption of prohibitory measures.

Although I am fully convinced of the injurious effects of ganja and the benefit which will be derived by its total prohibition, I think I would not be justified in advocating a sudden prohibition, having regard to the dissatisfaction which it may likely cause to a class of people known as *sanyasis*, *bairagis*, and *fakirs*, whose facilities for giving trouble are very great owing to their peculiar position and habits of life. I do not think, however, that this dissatisfaction of certain classes of people on account of the prohibitory measure in itself is likely to cause any serious annoyance to Government, but this, when added to other similar causes of dissatisfaction, might bring about discontent. It is scarcely necessary to point out the nature of the influence which these *sanyasis** and fakirs still exercise over a vast number of people who have not received English education.

There are other grounds besides the one mentioned above which lead me to recommend a gradual prohibition. If, instead of adopting a sudden prohibitory measure, the Government adopt a gradual one, it will get time to institute further inquiries, should it be considered advisable, with a view to ascertain the exact physiological action of ganja. If it be found possible to refine the drug† and make it less injurious by diminishing its narcotic effect, the question would then arise whether, like opium, it would not be advisable to make a Government monopoly of the drug. If, however, on moral or other grounds this course does not commend itself to Government, it would be a question for further consideration whether the cultivation and manufacture of ganja might not be concentrated at one place under direct Government supervision. In the latter case the disadvantages of the monopoly system may be avoided, while at the same time the advantage, namely, the control of the strength of the drug, might be obtained, and the smuggling of the drug may be minimised. At present we have not sufficient means to ascertain how far the injury caused to the consumers of the drug is due to the pure drug itself, and how far to the other poisonous substances that are occasionally mixed with it. This difficulty would be removed if the entire cultivation and manufacture of the drug are brought under Government supervision. Another great advantage to be derived by the adoption of this course is, if after further consideration and investigation, as suggested above, the Government decides for total prohibition, that nothing would be more easy than to give effect to such a measure. I would therefore recommend that, as a preliminary step towards prohibition, the cultivation of ganja may be concentrated in one place, and its manufacture and sale be brought under direct Government supervision.

* "Groups of these wanderers are frequently to be seen all over the country, lodging under large trees, the shady boughs of which serve as a canopy, under which they eat, drink, and sleep contentedly, a small raised hollow made of dried clay holding the fire which boils their culinary ingredients. At night they lie down for the most part on the bare ground or on little mats, with nothing softer than the roots of trees for their pillows In this way they stroll, not only over all India, but even over parts of Central Asia, and some are known to have rambled on so far as Astrakhan and St. Petersburgh They do not mind their privations while the liberty of their life they enjoy, and with some those distant journeys are not altogether aimless, as they carry many valuable things in their girdles in which they traffic. Begging is, of course, unavoidable to such a life, but the sanyasis eschew it as much as they can. Among them are to be found some very clever men "—Page 90, India : Past and Present, by Dutt.

† "If, instead of seeking to stop its entry into the country, we were to direct our attention to its refinement and purification, a vast amount of good would ensue.—(*The British Medical Journal, dated September 23rd, 1893*)

I would further suggest for the consideration of the Government the following :—

Although in the opinion of scientific men ganja does not lose its narcotic value in lapse of time, yet the popular belief among consumers throughout India is that the drug loses its strength in time. I, however, believe it is quite possible that by exposure to air for a long time the ganja may lose its narcotic strength by a slow oxidation process. I would therefore suggest that ganja may not be allowed to be sold till after the expiry of one year from the date the crop is harvested, thus enabling the people to use it in this less injurious form.

It has come to our knowledge that some parts of the country grow stronger ganja than others. The physiological investigation concerning the various kinds of ganja grown in this country cannot be said to be complete. I would therefore suggest that, if it be actually found after due investigation that the drugs have different narcotic values in different parts of India, the cultivation and manufacture of the stronger form should be discouraged and its sale altogether prohibited, the weaker ganja only being allowed to find its way to the market.

It has been elicited in our inquiry that in some parts of the country women sell these drugs. The vend of these drugs, especially through women, lends an additional inducement to the buyers to indulge in these drugs. It would be well if measures are adopted to put a stop to these practices.

In paragraph 648, Chapter XVI, of the Report it has been recommended that the licensees of retail vend should not sell these drugs to children and insane persons. It would be better in case of children to fix an age limit, say 16, and to further restrict the sale to persons who, being under the influence of ganja or some other intoxicant, have no self-control at the time. It should further be stipulated in the license that no vendor shall adulterate his drugs with dhatura seed and other poisonous stuff. A heavy penalty should be imposed for infringement of the above rules besides forfeiture of the license.

The practice of consuming the drug in the shops should be discontinued, as in some cases it gives great facilities to consumers who on account of the joint family system, out of respect to their elders, cannot dare to take it in family dwellings houses. The practice of smoking in the shops also leads to the excessive use of the drug.

In England, although heavy duties are levied on all kinds of intoxicating articles, including tobacco, and the arrangements of excise administration and control of the use of intoxicating drugs are more complete than in any other country, still the legislature of that country very wisely kept aloof from touching the preparation and use of the weakest kind of drink—beer—for home consumption. No duties are levied there on private brewers occupying small houses not exceeding £8 annual value, and who are brewing only for domestic use*. Though this arrangement causes loss of Government revenue to a large extent, yet, on the other hand, it, supplying the people with a less injurious kind of beverage, keeps them to some extent from the attraction of strong spirituous drink. In the same manner the Government of this country can help the cause of temperance by losing a little of its hold on a glass of sap from a palm tree belong-

* 49 and 50 Vict., Chapter 18, section 3.

ing to a poor cultivator or a handful of leaves from a bhang plant growing spontaneously adjoining his homestead. It is greatly to be regretted that my colleagues should have thought it advisable to recommend the imposition of increased duty on bhang and the adoption of a system which would not only practically deprive the poor rural population of some parts of the country of the use of bhang leaves as a cooling beverage during the hot months of the year and as a domestic medicine for men and cattle, but would also drive them to some extent to the ganja shop to satisfy their craving for stimulant, as has been already the case in the Central Provinces. In former times bhang leaves were procurable in almost all the districts of the Central Provinces, but now, probably owing to the good administration of the Excise Department of those provinces, it is a rare thing there, and more than one witness in the Central Provinces states that the people use ganja in the form of a drink because they cannot get bhang. The matter has come to this pass not only in the Central Provinces, but also in many parts of Southern India. Many experienced native gentlemen as well as Government officials are of opinion that it would be well to leave bhang alone. Bengal witness No. 25, Mr. N. K. Bose, the District Magistrate and Collector of Noakhali, says :--

"The taxation in case of bhang seems quite unnecessary."

Quotations to the above effect could be given from the statements of the witnesses, but I do not think they are needed.

It has been shown already that bhang is probably the least injurious of all the intoxicants commonly used in this country. It is to a great extent connected with the social and religious customs of the people. Its use as a cooling drink in the hot months is very common in the central and north-west parts of India. As a domestic medicine for men and cattle, it is much in use among the rural population. The bhang plant growing wild can be found in almost all parts of Northern India. In my opinion it would not be a very easy task to bring the sale and manufacture of bhang under full control of the Excise Department of the Government without much annoyance to the people. I for these reasons recommend that bhang may be left alone for the present.

18th August 1894. SOSHI SIKHARESWAR ROY.

Note of Dissent by Lala Nihal Chand.

I joined the Commission in Calcutta on the 3rd August 1893, and after remaining for about a month in Bengal went with the other members to the North-Western Provinces, Central Provinces and Bombay Presidency.

On the 20th September while at Poona I fell ill and was forced to seek relief at home. This deprived me of a visit to the Madras Presidency. I rejoined the Commission on the 30th October 1893 in the Central Provinces at Nagpore, when witnesses were orally examined, but on the 18th November was again obliged to fall back and remained at home till the 17th April, when I joined at Lahore in the Punjab and remained with the Commission till the last sitting of the 6th August 1894. Thus I was with the Commission for 181 days out of 369 days that the Commission lasted.

The gap in my attendance would have proved more or less serious had it not been for the fulness with which all the affairs that transpired in my absence were recorded. The written answers of each witness and his statement at the oral examination, if there was any, as well as all the Provincial reports, memoranda and statistics, were printed and supplied to each member from time to time, and a careful study of them gave me a pretty complete knowledge of the whole subject.

2. On the 26th April 1894 the majority of the members expressed themselves that they were inclined to the view that the total prohibition of the hemp drugs was inexpedient, and on the 12th May this view was finally confirmed by them. Raja Soshi Sikhareshwar Roy was not present on these occasions, and I reserved my final opinion, as the notes on facts and figures which the members had to prepare in pursuance of the President's note dated the 25th April 1894 were not at that time ready and discussed by the Commission, and I thought it premature to express any conclusive opinion without duly weighing the arguments which each member had to advance both in favour and against these drugs.

3. It is with the deepest regret that I find myself compelled to dissent from my worthy colleagues; but thoroughly convinced of the justice of the views that I have been led to entertain, by a careful study of the literature on the subject, as well as by discussions with other members, I feel it a duty to lay them before my august Government for its due consideration. I must also note here by way of an apology for the incompleteness with which the points touched in the present note have been dealt, the great disadvantage under which I labour in having to express myself in a foreign language, a command over which I cannot profess to have, nor can I pretend to have the experience and skill required in drawing up an official report. I cannot therefore do more than give a bare statement of the facts and to support them with the statistics that have been collected by the Commission and which I believe fully bear them out.

I also wish to state that I concur with the other members for the most part as far as *bhang* is concerned, *excepting its taxation,* and I take exception to their views chiefly in connection with ganja and charas. I think that in considering the different products of the hemp, it would have been better if a broad distinction were kept up all through; and in summarising the results in some places, it would perhaps have been better not to dispose them off with the general terms like the *hemp drugs.*

4. The points where I materially differ from my colleagues are—

(1) Taxation of bhang.

(2) Production of ganja from wild plant.

(3) Dose and number of consumers.

(4) Proportion of excessive to moderate consumers.

(5) Extent of use.

(6) Public opinion, social and religious, about their use.

(7) Social and religious customs bearing on these drugs.

(8) Effects—

(*a*) Physical.

(*b*) Mental.

(*c*) Moral.

(9) Hemp drugs compared with alcohol.

(10) Evidence from Native States and army.

(11) Prohibition—

(*a*) Precedents of other countries.

(*b*) Desirability and feasibility of prohibition.

(*c*) Political danger.

(*d*) Danger of using more deleterious drugs.

(12) Some of the conclusions arrived at by the Commission—

(*a*) Policy of control and restriction.

(*b*) Method of taxation.

(*c*) Introduction of Bengal system into other provinces.

(*d*) Abolition of the fixed price at which wholesale vendors in the Central Provinces are bound to sell ganja to the retail vendors and grant of wholesale licenses more freely and without charge in the Central Provinces.

(*e*) Gradual taxation of charas.

(*f*) Proposal for opening new shops.

(*g*) Sale of ganja in Burma.

5. As stated in paragraph 564 of the Report, it is proved by a large majority of witnesses that bhang is less injurious than any other intoxicant used in this country, and does not seem to be so deleterious as to justify the Government to take an action with the view of prohibiting or restricting its use. Bhang is produced from hemp plant, wild and cultivated, which spontaneously grows in Northern India all along the Himalaya hills, on the sides of the Eastern and Western Ghâts and in some other parts of the country. Therefore it is practically impossible to control its growth and consumption.

It is used as a cooling beverage by the people at large, mixed with some ingredients which modify its evil effects if any, and its use is associated by certain sects of people with their religious and social observances. Moreover, it is used as a domestic medicine for men and cattle by the rural population. Taking all these points into consideration I am led to recommend that

bhang should be left alone and made free from all taxations. A few quotations are given in justification of these remarks:

(1) The North-Western Provinces Excise Report for 1883, paragraph 86: (The Honorable) "Mr. Cadell dwells on the necessity for dissociating the injurious ganja and charas from the less hurtful bhang. The former drugs appear to occupy, with reference to the latter, a position somewhat similar to that of chandu to opium, and it appears desirable that the more injurious drug should be rendered less accessible than the more innocent one."

(2) North-Western Provinces witness No. 1, the Honorable A. Cadell, Member, Board of Revenue, *oral*:—"As I said ten years ago, bhang is practically harmless."

(3) Bengal witness No. 25, N. K. Bose, Magistrate and Collector of Noakhali:—"The taxation on bhang seems quite unnecessary."

(4) Punjab witness No. 77, Lalla Ganesh Dass, President of the Sarin Sabha, Hoshiarpur:—"Bhang is less injurious and is often religiously used at Guru-dwaras, and is also used by zamindars in the treatment of cattle. As it grows wild, the subordinate Government officials will have many chances of harassing the subjects if prohibition is enforced and therefore bhang should not be prohibited."

(5) The Honorable D. R. Lyall, Member, Board of Revenue, Calcutta:—"I never heard of bhang being blamed for insanity."

(6) Bengal witness No. 88, Mr. F. H. Tucker, District Superintendent of Police, Dinajpur:—"Bhang ought to be allowed freely."

(7) Bengal witness No. 89, Mr. R. L. Ward, District Superintendent of Police, Rajshahi:—"I would not tax bhang."

(8) Punjab witness No. 4, Lieutenant-Colonel J. B. Hutchinson, Officiating Commissioner, Rawalpindi:—"I ought to add that to make bhang more expensive or to prohibit it has this additional danger, that people might take to other things that are worse, and so far as I know there is no need for the restriction of bhang."

(9) North-Western Provinces witness No. 8, Mr. H. Fraser, Collector of Bijnour, *oral*:—"I think it is quite unnecessary to check the use of bhang. I have never known it do any harm."

(10) North-Western Provinces, Mr. T. Stoker, Excise Commissioner, says in his memorandum, paragraph 44:—"If it be admitted that so long as human nature remains unchanged some form of stimulants will be used, it follows that any measures to restrict drugs will be only half successful unless they are accompanied by measures which will render less harmful stimulants more accessible."

(11) Central Provinces witness No. 14, Rughanath Rao, Extra-Assistant Commissioner, Damoh, *oral*:—"Good bhang I have already said should be made more available. It would reduce the use of *ganja* as bhang, and also the use of spirituous liquor among the higher classes. Ordinary ganja used as bhang is more injurious than good bhang. The higher classes would also smoke ganja less. They would also take liquor less. All this would, in my opinion, be a change for the better."

6. Paragraphs 228 and 236 of the Report contain:—"It appears then that a very inferior but smokable ganja may occasionally be obtained from the

spontaneous growth. The great majority of witnesses nevertheless state that ganja is not procured from the wild plants; and undoubtedly what is ordinarily accepted as ganja cannot be so obtained." "Mr. Wall, a late Commissioner of Excise (North-Western Provinces and Oudh), does not believe that ganja is produced by wild plants; and that many other witnesses take the same view."

The above extracts fairly establish that ganja cannot be produced from the wild plant. The following quotations further support the same view and conclusively prove that no kind of ganja either superior or inferior can be made from it.

(1) Bengal.—The Excise Commissioner, in his memorandum, paragraph 6, says :—" No ganja or charas is made from the wild plants as the narcotic element, which is very essential to the preparation of either drug, is entirely absent or very imperfectly developed in the uncultivated plants."

(2) Dr. Prain, in his report on the cultivation of ganja, chapter VI, page 11, says :—" Ganja is obtained from cultivated plants only, and of the female sex exclusively, the males being not only not used, but not permitted to grow in the vicinity of the crops in order that the formation of seeds may be as far as possible prevented."

(3) Memorandum by Brigade-Surgeon-Lieutenant-Colonel J. King, M. B., Director of Botanical Survey of India, dated 28th October 1893 :—" The plant familiarly known as Indian hemp (*Cannabis sativa*, L.) is really wild in no part of British India. But in all parts of India, and also in Upper Burma, plants of it may be found growing without cultivation near villages and gardens, where hemp is at present, or has in former times been, cultivated. In botanical phraseology, hemp is found in India, not as an indigenous plant, but as an escape from cultivation."

(4) Bengal witness No. 17, K. G. Gupta, Excise Commissioner, says; " No ganja is made from the wild hemp plant."

(5) Bengal witness No. 80, Babu Hem Chunder Kerr, retired Deputy Collector, and the officer deputed to make special enquiries about ganja in 1877, says : " The wild plants do not yield ganja."

(6) Bengal witness No. 6, A. L. Johnson, Commissioner, Dacca : *oral* :— " The wild plant is not used for ganja, but the leaf is used for bhang," and that " I know no case of ganja prepared from the wild plant without cultivation."

(7) Bengal witness No. 3, W. H. Grimley, Commissioner of Chota Nagpur :—" The plant in its wild state does not produce ganja. Bhang can be prepared from the wild plant, wherever grown, but I am doubtful about ganja, and that ganja consists of the resinous coated flowering-tops of the cultivated unfertilised female plant. The plant in its wild state does not produce ganja."

(8) Assam witness No. 2, J. J. S. Driberg, Commissioner of Excise, Shillong, *oral* :—" I think there is no such thing as wild ganja. It does not grow of itself like other weeds."

(9) Assam witness No. 9, G. A. Gait, Director of Land Records and Agriculture :—" I have never found the spontaneous growth of hemp in the jungle, only in places formerly cultivated or still under cultivation. The jungle grass appears to choke it even when it grows."

(10) Assam witness No. 13, Ishan Chander Patranavis, Extra-Assistant Commissioner of Sylhet :—" Hemp plants are not cultivated in this district. In

some places a species of plants grows spontaneously, which is called bhang, and which never produces ganja."

(11) North-Western Provinces and Oudh witness No. 8, Hugh Fraser, Magistrate and Collector, Bijnour:—" Bhang can be prepared from the hemp plant wherever grown and by any person ; ganja and charas cannot."

(12) North-Western Provinces and Oudh witness No. 63, Birg Nath Sahai, Excise Naib-Tahsildar, Gorakhpur:—" Ganja and charas cannot be made from the wild plant."

(13) North-Western Provinces and Oudh witness No. 254, Lala Sheopershad Rai Bahadur, *oral*:—" Ganja and charas cannot be made from the wild plants. The sample shown to me is ganja, and has been grown from ganja seed. It could not have been got from the wild plants."

(14) Punjab witness No. 63, Sirdar Bahadur Bhugwan Singh, zamindar, Amballa District:—" Ganja is not raised from the wild hemp seed, for it is another class of product."

(15) Bengal witness No. 64, Gobindra Chundra Das, Deputy Magistrate and Deputy Collector of Malda:—" There is one point to which I wish to lay particular stress in this connection. The cultivation of ganja has been confined to the Rajshahi tracts for nearly half a century; previous to that even there is no evidence to show that ganja used to be ever grown on a large scale in any other part of Bengal. It follows therefore that the cultivators of Bengal, even if they had ever cultivated ganja, have long forgotten the method of its cultivation, and would be unable to cultivate it now even if they be willing to do so. Further, it has been by no means established that the climate and soil of other parts of Bengal would be at all suitable to the growth of the ganja-bearing plant. An experiment to cultivate the ganja at Sibpur under the scientific supervision of the Director of Land Records has by no means proved a success. * * * It is also known that the presence of a single male plant is sufficient to destroy the whole crop of a field. Ganja experts would be necessary to root out the male plants before one can hope to successfully raise the crop of ganja."

Dose.

7. The consumption of ganja and charas per head has been fixed in the Report for the different provinces at the following rates :—

Province.	Ganja.	Charas.
Bengal (paragraphs 342 and 349) ...	½ seer per annum ...	¼ tola per day.
North-Western Provinces (paragraphs 356 and 357).	1 seer do. ...	½ seer per annum.
Punjab (paragraph 369)	Not used ...	¾ seer do.
Central Provinces (paragraph 378) ...	1½ seer per annum...	Not stated.
Madras (paragraph 385)	1 seer do. ...	do.
Bombay (paragraph 391)	1 seer do. ...	do.

The consumption seems to be fixed rather arbitrarily. One reading the Report cannot help thinking that the figures have been fixed so as to bring the

quantities within the purchasing power of the people, a proposition which ought to have formed the ultimate object of the Commission to establish.

(*a*) *Paragraph 349 of the report.*—" The drug (charas) is used by people of better means. It is therefore in all probability taken more liberally and excess is more common."

(*b*) *Paragraph 356.*—" If the average annual allowance of something less than one seer be regarded as being composed of $\frac{1}{4}$ baluchar and $\frac{3}{4}$ths pathar, the cost comes to a reasonable figure."

(*c*) *Paragraph 369.*—" In the Punjab a somewhat higher rate ought to be adopted because the drug is cheaper, the price to consumers ranging from Rs. 9 to 15 per seer in this province, while in the North-Western Provinces it was Rs. $7\frac{1}{2}$ to Rs. 25."

(*d*) *Paragraph 378.*—" On the other hand, the comparative cheapness and inferiority of the drug suggests a higher allowance than was thought appropriate for the Bengal calculations."

(*e*) *Paragraph 385.*—" Looking to the cheapness and comparative inferiority of Madras ganja, the average yearly allowance of the habitual consumer cannot be put at less than one full seer of 80 tolas."

8. Confining to Bengal, the yearly allowance of a moderate consumer is taken at 35 tolas or less than $\frac{1}{10}$ of a tola a day; while Babu Hemchandra Ker, Bengal witness No. 80, a retired Excise Deputy Collector, who was especially deputed by the Government of Bengal to enquire into the use of ganja in 1877, estimates the dose for a moderate consumer at 1 dram or about $\frac{1}{3}$rd of a tola, and for an excessive consumer at 1 ounce a day, *i.e.*, $1\frac{1}{2}$ and $11\frac{1}{16}$ seers respectively as yearly allowance.

The quantity stated by several other well-informed witnesses is as follows:—

Province.	No. of witness.	Name and rank.	Daily dose of a moderate consumer.	Daily dose of an excessive consumer.	REMARKS.
Bengal ...	160	Raja Piari Mohan Mukerjee, Zamindar ...	$\frac{1}{4}$ tola	1 tola.	
	9	J. C. Price, Collector ...	$\frac{1}{2}$ "	2 tolas.	
	163	Raja Mohima Ranjan Roy Chowdhry	$\frac{1}{4}$ "	1 tola.	
	231	Rajkumar Sarbadhikari, Secretary, British Indian Association	$\frac{1}{4}$ "	2 tolas.	
	66	Nobin Chandra Ker, Excise Deputy Collector ...	$\frac{1}{4}$ "	1 tola.	
	11	F. H. B. Skrine, Collector	$\frac{1}{4}$ "	1 "	
	10	F. H. Barrow, Collector ...	$\frac{1}{4}$ "	$\frac{1}{2}$ "	
	69	Suresh Chandra Pal, Excise Deputy Collector ...	$\frac{1}{4}$ "	$\frac{3}{4}$ "	
	249	District Board Sub-Committee, Mymensingh ...	$\frac{1}{2}$ "	5 tolas.	
	31	Colonel Garbett, Deputy Commissioner ...	$\frac{1}{4}$ "	...	
	32	C. A. S. Bedford, Deputy Commissioner ...	$\frac{1}{4}$ "	$\frac{1}{2}$ tola.	

The average daily allowance for a moderate consumer cannot therefore be put at less than ¼th of a tola and one tola for an excessive one. In the report the individual dose for charas, which is stronger than ganja, is fixed at ¼ tola a day.

Proportion of excessive to moderate consumers of ganja.

9. In paragraph 344 of the Report, the proportion of excessive to moderate consumers of the hemp drugs is taken at 5 per cent. for all the Provinces, apparently without assigning any reasons. I find that this view is not supported by well-informed witnesses, a few of whom are quoted below. The proportion of excessive consumers to moderate consumers should not, I think, be taken at less than 15 per cent.—

Province.	Number of witness.	Name and rank.	Proportion of excessive to moderate consumers.
Bengal	134	Secretary, Bogra Medical Society	20 per cent.
	92	W. R. Rickets, Manager, Nilgiri State.	10 do.
	69	Suresh Chandra Pal, Special Excise Deputy Collector.	10 do.
	249	District Board Sub-Committee, Mymensingh.	20 do.
	32	C. A. S. Bedford, Deputy Commissioner.	20 do.
	10	F. H. Barrow, Collector ...	25 do.
North-Western Provinces.	35	Khan Bahadur Sayad Ali Hasan, Revenue Member, Rampur State.	10 do.
	178	Lala Nihal Chand, Zamindar and Honorary Magistrate of Saharanpur.	15 do.
	248	Drug Contractor	15 do.
	182	Raja Lachman Singh, Retired First Class Deputy Collector.	20 do.
	48	Pandit Ragobar Dyal, Deputy Collector.	20 do.
	199	Thakur Lakhan Singh, Zamindar	15 do.
	222	Manager, Court of Wards ...	10 do.
	202	Kanwar Mandhata Shah, Zamindar	15 do.
Punjab	88	Drug Contractor	15 do.
	21	Extra Assistant Commissioner ...	17 do.
	32	Inspector-General of Prisons ...	25 do.
Central Provinces ...	14	Ragunath Rao, Extra Assistant Commissioner.	20 do.
	64	Rao Sahib Balwantrao Govindrao, Jagirdar.	15 do.
	80	Abkari Contractor	10 do.
	46	The Hon'ble Gangadharrao Madhav Chitnavis, Member of the Vice-regal Council.	10 do.
	15	Syad Mohamed Hasan, Extra Assistant Commissioner and Dewan, Khairagarh State.	15 do.
	17	Superintendent, Kalahundi Estate	20 do.

Cost and number of consumers in Bengal.

10. Combining the doses of moderate and excessive consumers with their proportion, I arrive at 132 tolas instead of 40 tolas given in the Report as the average quantity consumed per head per annum, and the cost per head of consumer will be Rs. 33 instead of Rs. 10 arrived at by the Commission, while the number of consumers for Bengal will be reduced from 4,00,000 to 1,14,000 for the quantity given in the Report.

Extent of use.

11. *Bengal.*—The excise system of Bengal is held to be the best and most complete of those extant in India. The ganja in that Province is subjected to two-fold taxation—(1) fixed duty on weight, (2) license-fee levied on shops by auction. Its cultivation is confined within a circuit of 16 miles, but the area of ganja itself is not restricted; the cultivators on obtaining a pass, which is granted free, being allowed to grow it on as large an area as they choose, provided they have taken the trouble to enter it in their application. The fixed duty during the last 15 years, 1878-79 to 1892-93, has been raised on four occasions, the increase on the average amounting to Rs. 2-4 per seer (from Rs. 3-13 to Rs. 6-1), and the license-fee has been more than doubled, without apparently any decrease in the *known taxable* quantity of the Province, a fact proving clearly that the gradual increment in the fixed duty that is made from time to time is not calculated to check its use.

On the other hand, the rise in the area of its cultivation—which was 482 in 1878-79 and 1,180 acres in 1892-93; the increase in the money realized by auction of licensed shops—which rose from Rs. 5,41,436 in 1878-79 to Rs. 11,05,435 in 1892-93; a fall in the incidence of recorded outturn per bigha of cultivation—which fell from 9½ maunds in 1853-60 to 4¼ maunds in 1872-84 and 2 maunds in 1892-93; all these clearly prove that a great deal of illicit use is going on. In support of my statements I subjoin two tables: (1) showing *ganja* production and taxation in Bengal during 15 years 1878-79 to 1892-93 divided up into three periods corresponding more or less with the periods of rise in fixed duties, and (2) showing average outturn per bigha.

TABLE (1).

Period.	Rate of fixed duty.			Production.			Taxation.		
	Choor.	Round.	Flat.	Sold within the Province.	Exported.	Total.	Fixed duty	License-fee.	Total.
	Rs. a.	Rs. a.	Rs. a.	Mds.	Mds.	Mds.	Rs.	Rs.	Rs.
1878-79 to 1881-82, 4 years.	4 0	4 0	3 8	5,315	880	6,195	8,38,015	6,13,073	14,51,088
1882-83 to 1886-87, 5 years.	5 0	5 0	4 8	5,158	1,336	6,494	11,18,012	8,50,810	19,68,822
1887-88 to 1888-89 ...	6 8	6 4	4 8						
1889-90 to 1890-91 ...	7 0	6 4	4 8	5,224	1,642	6,866	13,00,545	10,01,685	23,02,230
1891-92 to 1892-93 ...	7 0	6 4	5 0						

TABLE (2).

Period.	Area under cultivation in bighas.	Outturn.	Outturn per bigha.	Remarks.
		Mds.	Mds. sr. ch.	
1853-54 to 1859-60, for 7 years	2,280	21,637	9 19 7	Taken from the Report of the Spirit Commission of Bengal appointed in 1883, paragraphs 92—94.
1860-61 to 1871-72, for 12 years	1,566	11,443	7 12 3	
1872-73 to 1883-84, for 12 years	1,986	8,435	4 9 13	
1884-85	2,014	7,168	3 22 0	Taken from the memorandum of the Excise Commissioner of Bengal.
1885-86	1,361	7,164	5 10 0	
1886-87	2,191	7,942	3 24 0	
1887-88	1,780	8,224	4 24 0	
1888-89	2,433	8,192	3 14 0	
1889-90	2,408	7,790	3 9 0	
1890-91	2,669	7,720	2 35 0	
1891-92	1,315	7,258	5 20 0	
1892-93	3,540	6,962	1 38 0	

The Commission in paragraph 350 of their Report have stated that the "consumption (of ganja) has been stationary during the last 15 years." This opinion is evidently based on the amounts of recorded sales of ganja without apparently any consideration of its area. My idea about the illicit use of this drug in Bengal which the present fixed high duty and its unchecked growth have done so much to encourage, is borne out by the following quotations:

(1) The Commissioner of Excise, Bengal, in paragraph 17 of his memorandum, admits that "the present system of storage is admittedly defective, and it cannot be denied that some ganja is smuggled or otherwise illicitly disposed of."

(2) Lord Ulick Browne, the Commissioner of Rajshahi, as quoted by the Spirit Commission of Bengal, says that—"Probably a closer watch and closer enquiries in the matter of the total area cultivated and the outturn prevail now than was the case 30, 20, and 15 years ago; and it may be that there are some errors in the outturns for the earlier years. But, allowing for this, the difference in the present average outturn per bigha, and the gradual reduction as the duty was raised, which you bring to notice, is startling; and the conclusion is almost irresistible that smuggling has increased with the duty, and that the increase in watchfulness has had little effect in preventing it."

(3) The same Spirit Commission, in their Report, paragraph 93, remarked that "The Commission are therefore unable to record any finding on the question discussed in this chapter, but they feel bound to state plainly that in their opinion the figures raise a suspicion of extensive smuggling of the drug and of its illicit sale by vendors under cover of licenses."

(4) This strong and emphatic expression of opinion made by so strong a body roused a suspicion in the mind of the Government and gave occasion to a full enquiry to be made on the subject, which was concluded by a letter from the Government of Bengal to the Board of Revenue, dated 23rd March 1887. That enquiry confirmed the opinion of the Commission, and I will do well in quoting His Honor's own words. Paragraph 11 of the above letter runs thus:—"The Lieutenant-Governor has had an opportunity of visiting Nowgong and of personally inspecting the Ganja Department at that place; and from enquiries made by him on the spot it appears to him that the widest opportunities for fraud and smuggling exist, though no proof has ever been adduced of detected smuggling of ganja on an extensive scale. The cultivated area is never measured. The result therefore at the end is entirely speculative and uncertain."

(5) Mr. E. V. Westmacott, late Commissioner of Excise, Bengal, witness No. 2, *oral*:—"There is undoubtedly some smuggling, and the statistics do not therefore show the full consumption of ganja.

(6) William Colebrooke Taylor, Special Deputy Collector, Orissa, witness No. 36, Bengal:—"The use of ganja is said to be on the increase; can't give reasons except that the existence of so many ganja shops must have a tendency to attract consumers and increase the consumption."

(7) Hem Chunder Kerr, Government Pensioner, witness No. 80 (question No. 59):—"With increase of duty, smuggling becomes more rife (*vide* my report, paragraph 133). The first improvement that I would suggest will be the reduction of the duty levied on ganja, which has been raised rather too high."

(8) Mr. G. Toynbee, Commissioner, witness No. 4:—"The Excise officers were constantly complaining of the smuggling, but I could not say the extent to which it was carried on. The complaints were never ceasing."

12. *Extent of use.—Assam.*—Assam follows suit with Bengal; the following are its figures for the similar period:—

Period.	Rate of fixed duty.			Imported in the Province.	Sold in the Province.	Taxation.		
	Chur.	Round.	Flat.			Fixed duty.	License-fee.	Total.
	Rs. A.	Rs. A.	Rs. A.	Mds.	Mds.	Rs.	Rs.	Rs.
1878-79 to 1881-82, 4 years ...	4 0	4 0	3 8	655	579	81,975	86,130	1,68,105
1882-83 to 1886-87, 5 years ...	5 0	5 0	4 8	671	607	1,11,785	1,19,600	2,31,385
1887-88 to 1888-89 ...	6 8	6 4	4 8	734	673	1,35,823	1,28,466	2,64,289
1889-90 to 1890-91 ...	7 0	6 4	4 8					
1891-92 to 1892-93 ...	7 0	6 4	5 0					

13. *Extent of use.—North-Western Provinces and Oudh.*—In paragraph 359 of the Report it is admitted that in the last 20 years, from 1873 to

1892, the revenue from hemp drugs has grown from 4 to 7 lakhs, and that the consumption of ganja and charas is proportionately on the increase. The statements of a few witnesses of this Province seem worth quoting.

(1) Mr. T. Stoker, Excise Commissioner, witness No. 6, North-Western Provinces, says in his oral statement:—" My idea that the consumption of charas is increasing is based on observation rather than statistics. I have explained how difficult it is to get accurate figures. The consumption is generally believed to be increasing in the eastern districts. I believe that to be undoubted."

(2) Witness No. 229, North-Western Provinces, Richard Burn, Excise Officer*:—" The use of these drugs is said to be increasing because, under the Moghul rule, it was forbidden under such heavy penalties as whipping or mutilation, while now it is allowed, and the use is spreading."

(3) Witness No. 8, North-Western Provinces, Mr. H. Fraser, Collector, Bijnaur:—" The use of charas is, I believe, largely increasing, as shown by the following figures of import:—

1890-91	Maunds	79
1891-92	"	100
1892-93	"	111

(4) Witness No. 182, North-Western Provinces, Raja Lachman Singh:—" It seems on the increase—

(1) Because the facility of obtaining them is greater.

(2) Caste-bonds and reverence for religious commands have been much destroyed by the development of customs and freedom of Europe."

14. *Extent of use.—Punjab.*—In paragraph 372 of the Report the increase of consumption of charas is admitted:—" From 1881-82 onwards there is a steady increase in the figures for charas, interrupted only by a fall in the year 1890-91, which, however, was more than made up by the rise of the following year."

15. *Extent of use.—Central Provinces.*—In paragraph 376 of the Report the increase of the consumption of ganja in these Provinces is also admitted:—" The figures of consumption of ganja given in paragraph 52 of the Excise memorandum show, since 1887-88, increase in every district except Hoshangabad and Narsinghpore. The decrease in these two districts is small: the increase in several districts is large." In paragraph 379 of the Report the statement of Mr. Neill, Judicial Commissioner, is worth reading. As one of the reasons of increase he says:—" The excise arrangements have advertised the drug and made it popular and supplied a superior quality of it."

(1) Paragraph 3 of the memorandum of the Excise Commissioner runs thus:—" In 1872-73 in almost every district a few plants were to be found in the garden of cultivators."

* NOTE.—This witness is not reported.

*Paragraph 4: "In 1873-74 the amount privately grown for home consumption was insignificant."

This shows that the production and consumption of ganja in these Provinces up to 1874 was very much limited. In April 1875 the cultivation of ganja was for the first time confined to Khandwa, in Nimar district; and its result has been not only that consumption of ganja has been stimulated and increased within the Province, but also that large quantities of ganja are exported to other provinces.

(2) The following statement contains quinquennial averages for the last 15 years:

Period.	Export in maunds.	Quantity sold and consumed in the Provinces.	Taxation.		
			Fixed duty.	Licensed duty.	Total revenue.
	Mds.	Mds.	Rs.	Rs.	Rs.
1878-1879 to 1882-1883	2,056	726	48,207	46,348	94,556
1883-1884 to 1887-1888	6,800	860	67,602	1,08,022	1,75,625
1888-1889 to 1892-1893	5,048	1,056	81,495	1,36,509	2,18,004

(3) In paragraph 34 of his report for 1884-85 the Excise Commissioner states:—" While in most districts of the province the number of ganja shops remained stationary, the consumption of taxed ganja increased, in spite of an increase of prices, which in some districts followed the enhancement of the license-fees for retail vend. The probable explanation is that the improved quality of the issues of the drug attracted anew the consumers who had been driven to seek their supplies elsewhere by the poorness of the stuff sold by Government licensees in 1882-83."

(4) Paragraph 41, Excise Report for 1887-88, by Mr. H. V. Drake-Brockman: "The part played by the Khandwa store as entrepôt for the supply of the ganja demand of those provinces is quite insignificant when compared with its use as a mart for the convenience of foreign purchasers. To it throng traders from Bhopal, Indore, &c., States; and licensed vendors from the North-Western Provinces compete with contractors from Berar for the purchase of the cultivator's stock. Between 6,000 and 7,000 maunds are annually exported to other provinces."

16. *Extent of use.—Bombay and Madras Presidencies.*—The consumption of charas in these parts is as yet unknown and that of ganja only small, but it seems to be increasing on, as V. Guravaya Sastri Guru, Member, Taluka Board, witness No. 166, Madras, says: "The use is increasing. The recognition of the Government of the sale of these drugs in open markets is in my opinion the sole cause of the increase." It must also be noted that in Madras the excise system was introduced only in 1890-91, and ganja of a *superior* quality like that manufactured in Bengal and the Central Provinces is still unknown.

17. Of the witnesses who expressed any opinion about the extent of consumption of hemp drugs, 357 stated that their use is increasing, while 148 stated that it is decreasing. The following is an analysis of them:

PROVINCE.	NO DECREASE.							DECREASE.		
	STEADY.			INCREASE.			Total.			
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.		Officials	Non officials.	Total.
Bengal ...	20	8	28	26	35	61	89	33	29	62
Assam ...	...	2	2	3	11	14	16	3	1	4
North-Western Provinces.	11	17	28	37	68	105	133	6	4	10
Punjab ...	6	7	13	12	18	30	43	6	1	7
Central Provinces	...	1	1	13	24	37	38	9	11	20
Madras ...	19	6	25	36	31	67	95	15	14	29
Bombay ...	18	8	26	11	12	23	49	6	4	10
Sind ...	2	3	5	6	6	12	17	...	...	...
Berar ...	3	1	4	4	4	8	12	2	3	5
Ajmere ...	...	...	...	...	...	...	...	1	...	1
Coorg ...	...	1	1	...	...	...	1	...	...	...
TOTAL ...	79	54	133	148	209	357	490	81	67	148

18. There are no complete statistics for the consumption of hemp drugs available for all the Provinces; a statement of revenue is therefore appended, from which a rough inference might be made as to the rise of the consumption of hemp drugs. The revenue during the last 20 years has nearly doubled itself.

Statement of Revenue from Hemp Drugs.

Year.	Bengal.	Assam.	North-Western Provinces and Oudh.	Punjab.	Central Provinces.	Madras.	Bombay.	Sind.	Berars.	Aimere-Merwara.	Coorg.	Baluchistan.	Total.
1873-74	10,96,621	99,052	4,07,822	1,43,921	50,707	...	54,561	76,681	Not given.	2,265	Not given.	Not given.	
1874-75	10,75,584	1,04,581	3,94,974	1,46,232	57,082	...	55,643	76,644		2,691			
1875-76	11,37,149	1,09,257	4,24,002	1,38,232	55,053	...	52,977	78,195		3,338			
1876-77	12,15,780	1,19,742	4,37,426	1,43,937	60,626	...	52,981	86,366		3,501			
1877-78	14,04,372	1,54,726	3,70,903	1,48,477	69,263	...	50,126	79,320		3,424			
Total of 5 years ...	59,29,506	5,87,358	20,35,217	7,20,799	2,92,731		2,66,288	3,97,206		15,219			1,02,44,324
Average	11,85,901	1,17,471	4,07,043	1,44,159	58,546	...	53,257	79,441		3,043			20,48,864
1878-79	13,68,332	1,52,588	4,33,425	1,38,512	83,144	...	49,234	73,905		3,200			
1879-80	13,17,343	1,55,135	4,09,068	1,39,577	89,937	...	50,060	65,201		3,330			
1880-81	14,92,550	1,78,074	4,16,298	1,31,574	92,850	...	47,788	75,304		3,675			
1881-82	17,55,673	1,86,780	4,55,448	1,37,563	97,236	...	59,314	84,336		3,485			
1882-83	18,99,530	1,97,674	4,97,787	1,39,487	1,11,095	...	81,362	87,888		4,816			
Total of 5 years ...	78,33,428	8,70,251	22,12,026	6,86,713	4,74,262	...	2,87,758	3,86,634		18,506			1,27,69,578
Average	15,66,685	1,74,050	4,42,405	1,37,342	94,852	...	57,551	77,326		3,701			25,53,915
1883-84	20,12,133	2,39,872	5,53,356	1,44,640	1,29,207	...	94,337	95,114		4,810	652		
1884-85	20,25,922	2,46,788	5,49,279	1,46,608	1,62,340	...	1,04,314	1,03,857		5,931	658		
1885-86	19,85,043	2,25,506	6,03,173	1,48,620	1,92,679	...	1,08,497	98,379		5,431	658		
1886-87	21,18,048	2,47,285	6,70,605	1,52,771	2,12,691	...	1,10,325	1,06,206		5,430	698		
1887-88	22,92,069	2,22,511	6,48,432	1,47,565	1,90,528	...	1,18,875	1,14,723		5,900	698		
Total of 5 years ...	1,04,33,206	11,81,962	30,24,845	7,40,2·4	8,87,445	...	5,36,349	5,18,279		27,502	3,364		1,73,53,155
Average	20,86,641	2,36,392	6,04,969	1,48,040	1,77,489	...	1,07,269	1,03,655		5,500	672		34,70,631
1888-89	23,65,871	2,39,061	7,08,504	1,47,048	2,00,168	...	1,20,552	1,23,164		5,375	698		
1889-90	23,08,433	2,50,875	7,31,352	1,54,885	2,02,419	4,890	1,21,020	1,37,544		4,935	798		
1890-91	23,65,064	2,79,528	6,92,214	1,55,687	2,12,580	8,805	1,30,709	1,36,405		6,335	798		
1891-92	23,50,562	2,90,219	7,12,087	1,57,297	2,29,251	54,989	1,33,328	1,41,614		6,740	798	900	
1892-93	24,50,705	3,03,633	7,04,788	1,70,854	2,54,931	47,292	1,40,593	1,65,310		7,270	798	4,175	
Total of 5 years ...	1,18,40,635	13,63,316	35,48,945	7,85,771	10,99,349	1,15,976	6,46,202	7,04,037		30,655	3,890	5,075	2,01,43,851
Average	23,68,127	2,72,663	7,09,789	1,57,154	2,19,869	28,994	1,29,240	1,40,807		6,131	778	2,537	40,28,770

19. Public opinion, social and religious customs and class of consumers have an intimate connection with one another. They have been discussed in the Report at different places, but I will treat all of them together.

Public opinion.

Paragraph 489 of the Report deals with the question of public opinion (social and religious) which was put to the witnesses in question No. 33.

I do not agree in the conclusions drawn in the above paragraph—

(1) Because it was very essential to discriminate between the use of bhang and that of charas or ganja.

(2) Because the expression "disapproval" used therein is quite inadequate to convey appropriately the ideas expressed by the witnesses against the use of the drugs.

On careful examination of the evidence I find that public opinion is very strongly against the use of ganja and charas, that almost all the witnesses condemn their use in unqualified terms, and that the very words *ganjakhor* and *charaskhor* are words of great reproach, like tipplers or drunkards in English, as admitted in paragraph 489 of the Report, but that the use of bhang is not so much in disrepute. The point under discussion is an important one, and requires more attention than has been given in the Report.

20. The Mahomedan religion strongly prohibits the use of liquor and other intoxicants, as already admitted in the Report, para. 437.

21. The Sikh religion also prohibits the smoking of ganja and charas and even tobacco, as admitted in para. 440 of the Report.

22. As to the Hindu religion, I find that in ancient times of the sacred scriptures ganja and charas smoking was unknown. Neither any of the Smrities nor any of the ancient treatises on Ayurveda, *i.e.*, Hindu Medical Science, has a mention of it. It is admitted in para. 19 of the Report that the hemp plant is not indigenous to India. Bengal witness No. 52, M. Chakravarti, Sub-Divisional Officer, says in answer No. 25 that "with the later Mahomedan rule, tobacco-smoking and analogically ganja-smoking came into vogue." Bombay witness No. 91, Dr. Garde, Representative, Sarvajanik Sabha, Poona, says in answer No. 40 (5) that "the date of introduction of these narcotics in India cannot, in my opinion, go back beyond the 13th century A.D. Even to this day these narcotics have not made their way to any great extent in Southern India, where charas is hardly known by name, bhang scarcely even drunk, and ganja only smoked by a very insignificant portion of the population."

(*a*) It has been shown in para. 65 of this note that ganja and charas are not less deleterious in their effects, if not more, than liquor. I am therefore justified, I think, in coming to the conclusion that the prohibition against liquor enjoined in the Hindu Shastras should also be held to apply to the use of these hemp drugs with equal force, if not more. In Vishnu Smriti Chapter XLI, sloka 3, I find that eating nutmegs or other plants similar to intoxicating

drinks in their effects upon the system is one of the crimes causing defilement.

(b) The Institutes of Manu, called Manu Smriti, is the universally recognized authority on the Hindu religion, and the following instructions about the use of liquor are therefore quoted from it:—

(c) In Chapter XI of the above all the sins and crimes that can be committed by a man are divided into various classes according to their nature, and distinguished by different names. The worst of all the sins are enumerated as five in number and are called *Panchmahapatak*, the drinking of alcohol is one of them.—*(See Sloka 55, Chapter XI.)*

(d) There are numerous slokas in Manu Smriti in which the use of liquors and other intoxicants is prohibited, but it will suffice to quote the following verses from Chapter VII:

Sloka 45.—"Let him carefully shun the ten vices, springing from love of pleasure, and the eight proceeding from wrath, which (all) end in misery."

Sloka 47.—"Hunting, gambling, sleeping by day, censoriousness, (excess with) women, intoxication, (an inordinate love for) dancing, singing, and music, and useless travel are the tenfold set (of vices) springing from love of pleasure."

Sloka 48.—"Tale-bearing, violence, treachery, envy, slandering, (unjust) seizure of property, reviling, and assault are the eightfold set (of vices) produced by wrath."

Sloka 50.—"Intoxication, dice, women, and hunting, these four (which have been enumerated) in succession, he must know to be the most pernicious in the set that springs from love of pleasure."

Sloka 51.—"Doing bodily injury, reviling, and the seizure of property, these three he must know to be the most pernicious in the set produced by wrath."

Sloka 52.—"A self-controlled (king) should know that in this set of seven, which prevails everywhere, each earlier named vice is more abominable (than those named later)."

The eighteen vices enumerated above have been compared with one another, and it has been ruled that intoxication is the most pernicious of all the vices. Under these injunctions the use of charas and ganja should be taken as strictly prohibited.*

23. An analysis of the evidence received by the Commission with regard to the use of the hemp drugs is given in the following statement, which shows at a glance the public opinion as it prevails throughout the country at present.

* NOTE.—The original Sanskrit slokas above referred to with their translation will be found in Smriti-Prakash, a book which I have compiled and which contains a large collection of Hindu religious precepts from all the Smritis in Sanskrit with their translation in Hindi and Urdu.

GANJA AND CHARAS.

Province.	Disrepute.			Not disrepute.		
	Official.	Non-official.	Total.	Official.	Non-official.	Total.
Bengal	87	69	156	2	3	5
Assam	7	14	21	2	...	2
North-Western Provinces	46	81	127	3	5	8
Punjab	31	25	56	...	...	...
Central Provinces	21	38	59	1	1	2
Madras	73	56	129	1	5	6
Bombay	32	27	59	...	...	...
Sind	9	6	15	...	3	3
Berars	6	7	13	...	...	...
Ajmere...	...	...	...	...	...	...
Coorg	...	2	2	...	...	...
Beluchistan	1	...	1	...	...	...
Total	313	325	638	9	17	26

NOTE.—Witnesses who expressed no opinion on this question have not been included in this table.

24. The use of the hemp drugs is so much in disrepute that even the cultivating classes do not like to grow it, which will be seen from paragraph 174 of the Report, which runs thus :—

"Duthie and Fuller write that hemp-growing is restricted to the lowest classes of cultivators, being considered beneath the dignity of the higher castes. So much is this the case that the phrase 'may hemp be sown in thy house' is one of the commonest of abusive imprecations. Mr. Dharmanand and other witnesses corroborate this account."

25. The sale of liquor and hemp drugs has always been considered very objectionable and disreputable in India. There is no evidence to show that hemp drugs were ever sold by any class of persons before the introduction of the excise system. The sale of liquor was, however, practised by a certain class of people called "kalwars," who were considered so much impure that no high class persons would even touch them and no Brahman would receive a gift from them.

26. The use of ganja and charas is so much in disrepute that out of about 1,600 witnesses before this Commission not more than half a dozen were found to be consumers of these drugs, while there were a good many of the witnesses who used opium and admitted the habit without any hesitation before the Royal Opium Commission.

27. The class of consumers are also very low. As stated in paragraph 488 of the Report, "there are religious objections to the use of intoxicants by Mahommedans," and that "many of the Hindus who are both orthodox and respectable consider it contrary to their religion to indulge in these or any other intoxicants," that "orthodox Sikhs do not smoke and therefore regard ganja and charas as prohibited." It is mentioned there that ganja and charas are chiefly used by—

(1) Fakirs and wandering mendicants, Sadhus, and Pandahs, &c.

(2) Lower classes of both Hindus and Mahommedans, such as artizans, cultivators, fishermen, palki-bearers, day labourers, chamars, &c.

(3) Domestic servants of all kinds, as syces, dhobis, &c.

(4) Aborigines of different races, as Santhals, &c.

(5) Tradesmen, &c., of the lower middle classes.

It is further stated that "these are among the classes specially mentioned by witnesses as smoking hemp drugs. Among the upper classes this habit is generally regarded as exceptional and indicating a special tendency to dissipation, but not so among these lower classes." Bhang is also occasionally used more or less generally and practically by all classes on certain feast days at times of social rejoicing."

28. In this country the females do not smoke ganja or charas at all. In paragraph 468 of the report the fact is thus mentioned: "It is to be noted, however, that with the very rarest exceptions the evidence points to the use of the drugs by males only. Women would therefore appear either not to require or to be denied the benefits ascribed to the drugs."

29. In all parts of India the use of hemp drugs is much in disrepute, and there are hundreds of national songs in every dialect condemning their use. I give the following songs which have been mentioned by some of the witnesses:—

Name of province.	Witness No.	Original in Roman characters.	Translation in English.
Bengal ...	108	"Ganja khále báper nám bhule jai."	"He who smokes ganja forgets even his own father's name."
		"Siddhi khále budhi barey, ganja khále lukhi chare."	"The man who drinks bhang thrives, he who takes ganja goes to the bad (is deserted by the goddess Lukhi)".
North-Western Provinces.	29	"Charas piye, gur gyán ghate, bíj jale wá ke andar ká; khánsat, khánsat pet phate, múnh ho jai jaisá bandar ká."	"If one smokes charas, one's learning is diminished, the seed is burnt up within, coughing goes on till one's belly bursts, and one's face grows red like that of a monkey."

Name of province.	Witness No	Original in Roman characters.	Translation in English.
Punjab ...	70	"Wuh to charasi hai us ka kya thik."	"He is a charas smoker, you can't depend on him."
		"Huqqe to luqqe piwain afyun jangli khain ;	"Boasters smoke hukkas and wild people eat opium ;
		Bhang piyen so baore ut posti jain."	Those who smoke bhang are mad, and those addicted to the use of poppyheads die childless."
		"Ut posti jain charas ke piwan hare."	"Childless die who use poppy-heads, as also charas smokers ;
		Ghul ghul kar marjain maha papi hatyare."	"Sinners of this type die after a protracted illness."
		"Kahen Girdhar Kab Rai unhon men ek na achha ;	"Girdhar Kabra, the poet, says no one is good among them ;
		Karke madhra pan bat men loten bachha."	(Those mentioned above) they use liquor and like children lie down in the way."
		"Charas pila gur gyán ghala aur bij ghala waka ander ka ; sukh sukh lakar ho jawa, múnh howa jaise bander ka."	"A charas smoker loses religious wisdom imparted by the guru as well as vitality. He is gradually reduced to a mere skeleton, and his face resembles that of a monkey."
	8	"Khang karun, khurak karun, ankhian kolon aund karun, aje-bhi na mare, to main ki karun."	"I give (you) cough. I give (you) itch. I make (you) blind in your eyes. If (still) you do not die, what can I do (more)."
	29	"Bhang jab charti hai, kya kya maza diklati hai?	"When the effects of bhang rise (to the head), what feelings do they produce?
		Khat ko zor se pakarto ki kidhar jati hai."	(The man who has drunk bhang) holds on tight to his bed (and wonders) where it is going."
		"Ganja piwe mukh zard hai,	"Whoever smokes ganja, his face grows pale.
		Bibi kahe namard hai,	His wife will complain, he is impotent,
		Bhai kahe kuch dard hai.	His brother will say he is afflicted with pain,
		Ashak nashae me garq hai."	But the smoker will turn to his chillum again."
Madras ...	157	......	"He gave angi (coat) who smoked bhangi,
			And became a manga (monkey)."
Sind ...	27	"Ganja aur suka pine se hurmat gayi, Láj sharm gayi chhut, Anaj bechke lae ganja,	"Through smoking ganja and tobacco character is lost and modesty destroyed. Does not the heart of that man break who sells corn to buy ganja?

Name of province.	Witness No.	Original in Roman characters.	Translation in English.
		Gayi haiye ki phut? Gayi haiye ki phut, Kina yeh bina bichare, Bina bichare saukare, So pachhe pachtae."	My heart was broken indeed. I did it without thought, and all who act without thought will have to repent."
Sind ...	20	Charas nahi, kahir hai.	"It is not charas, but a curse.
		Kaleja to jal gaya.	It burns the chest and heart to its worse.
		Anki me lahir hai.	It brings on dimness of the eyes.
		Khang karun, khansi karun,	To phlegm and cough it must give rise.
		Ankhon se andha karun,	To blind the eyes it never fails.
		Paon se langra karun,	Or cripple limbs that once were hale.
		Ne marre to me kya karun."	In what but death ends its sad tale?"

Religious and social customs.

30. Paragraph 450 of the Report contains the general conclusions on this subject. It is stated therein that "charas, which is a comparatively new article of consumption, has not been shown to be in any way connected with religious observance"; "that as regards Northern India the Commission are of opinion that the use of bhang is more or less common everywhere in connection with the social and religious customs of the people," and that "as regards ganja they found that there are certain classes in all parts except the Punjab who use the drug in connection with the social and religious observances."

In the above statements I take exception to what has been said about ganja, which has no connection whatever with any social or religious customs.

31. It has been shown in paras. 19-29 of this note that the use of ganja and charas is much in disrepute; in para. 27 that the use is confined to low class people, and in para. 28 that females do not use them. Moreover, there is no sect, caste or class of people, high, middle, or low, in which their consumption is sanctioned by religion or society. If their use had any connection with any religious or social customs, all the members of a class, whether high or low, would have used them. The absence of their use among any class as a body clearly shows that they have no such connection.

32. It is admitted in paragraph 451 of the Report that, "as a matter of fact, it is not usual for those who use the drugs, specially those who smoke them, to do so in the presence of others. It is usually only the dissipated who make a practice of publicly using intoxicants". A few of the many witnesses are also quoted.

North-Western Provinces witness No. 49, Pandit Dharmanand Joshi, Settlement Deputy Collecter: "Charas smokers will take care not to smoke in presence of their superiors or those whom they venerate."

Bombay witness No. 104 Desaibhai Kalidas, Government Pleader: "Consequently when any one belonging to these three classes (Brahmans, Chatris, and Vaishyas of Gujrat) smokes or otherwise uses ganja, he has to do it in secret, and is ashamed of it in public."

Madras witness No. 173, Secretary, Gooty People's Association: "In these parts the consumers are held as contemptible, and a ganja smoker himself would not proclaim his habit, and feels it a disgrace to be known as a ganja smoker, but this remark is not applicable to fakirs and lowest classes of people." These drugs therefore can have no connection with any social or religious custom because all ceremonies are observed jointly by all the members of a family.

33. In para. 436 of the report a mention of Trinath mela is made. This mela of Trinath can in no way be called a religious one—

First, because its origin is of a very recent date, about the year 1867;

Secondly, because, as admitted in the last sentence of the above paragraph, this form of worship is dying out; and

Thirdly, because it is observed by Hindu and Muhammadan consumers of the drug alike, which would never have been the case had it been a religious worship of any of them. There is evidence to show that this mela is chiefly a creation of ganja-smokers. Witness No. 63, Abhilas Chunder Mukerjee, referred to in the above paragraph of the Report, as regards this form of worship, says in answer to question 33 that "educated people and people of the higher and middle classes in this country treat the ganja smokers with feelings of disrespect and call them "ganja-khor," "bhangi," "ganjari," &c.

34. I do not agree to the expressions contained in paragraph 435. It is a well-known fact that at the time of worship, water is poured on the image of Siva, the water being mixed with milk, sugar, and other ingredients. Sometimes those persons who are fond of taking bhang mix it with the water, but ganja is never so used. When the consumers of ganja cannot use it in presence of their elders, it can never be said or even imagined that it is consumed by the worshippers in temples, where as a matter of fact all kinds of smoking, even tobacco, are not allowed and are considered extremely objectionable.

35. In paras. 443 and 449 the statements of Reverend Campbell, Mr. Merriman (Madras witnesses), and Messrs. Campbell, Modie, Charles, Kothawoli, and Lamb (Bombay witnesses), have been quoted. In my opinion it is not safe, nor is it desirable to rely upon the evidence of European gentlemen only when questions connected with the Hindu or Muhammadan religious and social customs are under consideration. Bengal witness No. 1, the Hon'ble D. R. Lyall, says "but on this point natives will give better evidence," and in answer to question No. 33, "Here again native evidence will be best."

36. I therefore hold that, as the public opinion (social or religious) is quite against the use of ganja and charas, as has already been shown, and as they have no connection with the social and religious customs of the people, none but a

few of the habitual consumers will feel any hardship by their prohibition, and that class too for a time only. On the contrary, even the family members of the consumers will consider the prohibition of the drugs as a blessing to them. There will be no public discontent nor any interference with the religious and social customs of the people, if ganja and charas are prohibited, as the Hon'ble Gangadharrao Madhav Chitnavis, Member of the Viceregal Legislative Council, witness No. 46, Central Provinces, says: "It would not be considered as an interference with religion to prohibit either ganja or bhang."

37. A few of the many witnesses are quoted in statement I appended to this note in justification of the above views; but the following expressions made by Mr. James Wilson, Deputy Commissioner, Shahpur, Punjab, witness No. 14, deserve special attention:—

"I recently had all the intelligent and respectable Hindus of the district assembled in connection with the ascertainment of their tribal customs. I asked those who wished to have opium restricted to stand up, and no one stood up. I then asked those who wished the present system of dealing with opium continued, and they all stood up with acclamation. I then put the same questions regarding charas and bhang, and nearly the whole assembly stood up for prohibition; for continuance of the present state of things only one or two stood up. These said that fakirs would suffer, and the others said that would not matter: they would soon get over it. Some of the assembly, even of those who declared for prohibition, were themselves moderate consumers of bhang. They had clearly bhang as well as charas before their minds. Several of the persons were dealers in opium, and very few, if any, dealers in the hemp drugs. There were about 100 present at this meeting, mostly shop-keepers from all parts of the district and representative of the best feeling of their class.

"A number of the more respectable object to charas because their young men get tempted by the fakirs to use it and ultimately join that body. Some of the excessive smokers of charas have themselves expressed regret to me that they ever took to the habit, much in the way that excessive consumers of liquor will do. These men were fakirs; but a fakir in Shahpur is not only a religious devotee, but often an idle good-for-nothing, who assumes a religious character."

Effects.

38. *Physical.*—The medicinal use of the hemp drugs, as noted in paragraphs 458-67, has been somewhat exaggerated, but so far I agree, that they are *sometimes* used medicinally. Such use is, however, confined more to bhang than to ganja or charas, and it was very necessary to make a distinction between them in the Report. As I am not going to advocate for the prohibition of hemp drugs as far as their medicinal use is concerned, I would not discuss this point further, but content myself with quoting the following sentence from paragraph 469 of the Report:—

"A drug may be a useful medicine but a bad thing to allow into the market freely for general consumption."

39. As to paragraphs 468 to 473 of the Report, the beneficial effects, if any, can be attributed to bhang only, and very rarely to ganja and charas. As to their being food-accessory or digestive, my opinion is that a man who has become habituated to the use of the hemp drugs cannot derive any such benefit

from their use even if it is presumed that they have any such beneficial quality. There is sufficient evidence on record which shows that the use of these drugs improves digestion for a short time only, and that afterwards it destroys the power altogether. The experiments of Dr. Cunningham, mentioned in paragraph 483 of the Report, shows "that the only persistent symptom attending the treatment during life was a considerable diminution in appetite for food, and so on." It is according to the general principles of medical science that, however good or powerful a medicine may be, it loses its effects when used for a long time, and when the medicine is tolerated in the constitution.

40. It is stated in the Report, paragraph 471, that "hemp drugs both as smoked and as drunk are used as a febrifuge or preventive of the diseases common in malarious tracts or arising from the use of bad water." But this is not the case, and they are very seldom used for such purposes, as will be seen from paragraph 339 of the Report, which runs thus:—"North-east and east of Calcutta lies a huge tract of low consumption, comprising the districts of Noakhali, Khulna, Jessore, Nadia, Backergunj, and Faridpur. This fact har ly bears out the theory that residence in low-lying country and river-side life are very intimately connected with the ganja habit."

41. As to their use giving staying power, I must say that there seems to be no good foundation for such a belief. Mr. Stoker, Commissioner of Excise, witness No. 6, North-Western Provinces, says in his oral statement that—

"As a District Officer and Settlement Officer I got into intimate contact with the classes. I believe that these drugs are comparatively little used among the agricultural classes as compared with the town population and that excess is still rarer."

Mr. F. G. Sly, Settlement Officer, witness No. 10, Central Provinces, says:—

"The good cultivating caste say that they never use ganja or bhang as a stimulant to hard work, but that during the season of hard work they increase the quantity of their food and more particularly of ghee and milk."

Bhimbhai Kirparam, Deputy Collector, Bombay, witness No. 24, says:—

"In Guzrat Kumbies and Kolis are the principal agricultural classes. They eat opium. Therefore very few cultivators in Guzrat take ganja."

Deshaibhai Kalidas, Government Pleader, Bombay, witness No. 104, says:—

"Among the agricultural classes also ganja-smoking is found to a small degree only. On this side, even among the Sudras, ganja-smoking is so unfavourably looked upon that one from that class also would consider it low breeding to use it in public."

No one can deny that the poor cultivators of this country have to undergo more severe exertions, exposure, and fatigue than the common labourers and beggars. It naturally follows, then, that if these drugs possessed any such quality, the cultivators would have surely used them. Besides this the number of consumers is so limited as one in about every 500 of the population, and the overwhelming majority of labourers in India and Burma can do very well without them, as Mr. F. G. Sly, Settlement Officer of the Central Provinces, witness 10, says:—

"The information collected, however, tends to show that the use of hemp drugs as a stimulant to hard work is very limited indeed even amongst aborigines."

See also Trinidad Commission's remarks in paragraph 46 of this note on this point.

It is also to be taken into consideration that if a man can undergo harder exertions under the influence of ganja than his might would allow, his health is surely to break down sooner or later, and that it is rather a kind of inhumanity on the part of his employers to extort more work from him than his natural health and strength can permit.

42. As to paragraph 493 of the Report, the question of moderate and excessive use is a very important one. In the questions framed by the Commission much stress was laid on this point and separate questions were framed to make a distinction between them, as will be found on reference to the following questions :—

Moderate use.	Excessive use.
45, 47, 49, 51.	46, 48, 50, 52, 53.

But as no definition of the words moderate and excessive was made in the instructions attached to the question papers, many of the witnesses were much puzzled and not unfrequently misled. This difficulty has been accepted in the Report in paragraph 477 thus: "There is a good deal of justification of the failure of many witnesses to discriminate between moderate and excessive consumption. That which is moderate and harmless to one man may be too much to another." Some of the witnesses are quoted here in support of this. Surgeon-Lieutenant-Colonel M. D. Moriarty, M.D., witness No. 79, North-Western Provinces, says in his reply to questions 45 and 46 that "it is not easy to define moderate and excessive," and further on he has very truly said that "the greater the use, the greater the effect." Mr. E. V. Westmacott, late Commissioner of Excise, Bengal, witness No. 2, says, "I do not know how a moderate smoker is to be distinguished from an excessive smoker." Mr. H. M. Weatherall, Manager, Nawab's State, witness No. 197, Bengal, says, "It is very difficult to draw the lines where the harm begins." Surgeon-Lieutenant-Colonel A. Crombie, Bengal, witness No. 104, says, "I should cease to call smoking moderate when it began to affect the man's demeanor. This would be my definition of moderate smoking." Dr. J. W. Macnamara, M.D., Assam, witness No. 20, says in his oral examination that, "As to these intoxicants, I do not think the police would be in a position to discriminate between the moderate or excessive use. I do not think I could do it myself." Atul Chundra Roy, Assistant Surgeon, Assam, witness No. 25, says, "It is very difficult to draw a line of demarcation between moderate and immoderate use. As far as my experience goes habitual consumers scarcely keep within such a bound as not to be more or less sufferers in the long run." Mr. G. Godfrey, Commissioner, Assam, witness No. 1, says, "The excessive use of ganja has most pernicious effects, and it must be remembered that what is a moderate quantity for one person may be an altogether excessive quantity for another." Mr. S. S. Thorburn, Commissioner, Punjab, witness No. 3, says, "The difficulty is to know what constitutes moderate use. What is moderate for some would kill others." Surgeon-Major G. W. P. Dennys, Punjab, witness No. 34, says, "I do not know where to draw the line between moderate and immoderate. It really depends on how often and how rapidly a man inhales the smoke from his chilum." Dr. S. L. Dobie, Madras, witness No. 84, says, "In the case of alcohol I should of course discriminate between the moderate and excessive use. In the case of ganja I could not. It is much easier for a European to judge of alcoholism than of ganja."

The fact is that small doses of these drugs may not produce noxious effects for some time, but such effects are sure to follow sooner or later, smaller or greater, according to the constitution, habits of life, and circumstances of the consumer. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems which predispose them to acute diseases and cut their lives short. Brigade-Surgeon-Lieutenant-Colonel W. R. Hooper, witness No. 74, North-Western Provinces, says, "The physical and mental breakdown being gradual but certain in proportion to the rate and amount of indulgence and the constitution of the individual." Therefore the evil effects of the drugs should be taken into consideration without regard to the quantity consumed.

43. Again an overwhelming majority of evidence show that in the case of the use of hemp drugs there is a great tendency for the moderate habit to develope into the excessive. Question No. 31 was put to the witnesses on this point. The above conclusion is accepted in paragraphs 480 and 477 of the Report, which run thus: "It is a general belief that there is a tendency for the moderate habit to develop into the excessive," and that, "the moderate habit may undoubtedly develop into excess in some cases where excess might not have been looked for." In such a case it is quite immaterial to make a distinction between the effects of a moderate dose and that of an excessive one.

44. It has been alluded to in the Report in several places that the evil results from the use of hemp drugs have not hitherto obtruded themselves on observation, and that therefore some witnesses have abstained themselves from answering the questions 45 and 46 about the evil effects. But I find that a large majority of witnesses expressed their opinions about the effects of the use of these drugs, as will be seen from the following two statements, one of which is an analysis of the evidence of the medical witnesses and the other of the non-medical witnesses. An abstract of the two statements stands thus:—

Total witnesses (excluding Burma).			Deleterious. Moderate.						Not deleterious.			
Medical.	Non-medical			Non-medical.	Total.	Medical.	Non-medical.			Non-medical.	Total.	Medical.
328	812	1,140	209	414	623	286	561	847	76	167	243	1

It shows that out of 1,140 witnesses, 847 or 74·2 per cent. declare the excessive use to be deleterious against only 2, and that 623 or 54·6 per cent. declare even the moderate use to be deleterious against 243 or 21·3 per cent.

An analysis of evidence on effects from native states and army will be seen in paragraphs 66 and 67 of this note.

No. I.

Statement of medical evidence.

Names of provinces.	NOS. OF WITNESSES.				DELETERIOUS.								NOT DELETERIOUS.								INSANITY.				IMPOTENCY.				REMARKS.
					MODERATE USE.*				EXCESSIVE USE.				MODERATE USE.				EXCESSIVE USE.												
	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	Superior.	Subordinate.	Private practitioner.	Total.	
Bengal	21	11	27	59	8	5	19	32	15	11	24	50	7	4	7	13	...	...	...	...	16	10	21	47	7	6	13	26	
Assam	6	5	2	13	3	4	1	8	5	4	2	11	1	..	1	2	...	...	...	...	5	3	2	10	1	3	1	5	
North-Western Provinces and Oudh.	21	25	58	104	7	17	54	78	20	25	54	99	13	9	3	25	...	...	...	...	17	22	44	83	11	19	37	67	
Punjab ...	7	8	9	24	5	8	7	20	6	8	7	21	...	...	1	1	...	..	...	...	7	7	5	19	5	5	6	16	
Central Provinces ...	6	3	2	11	2	3	1	6	6	3	1	10	3	..	1	4	...	..	1	1	6	3	1	10	2	3	...	5	
Madras .	20	20	6	46	9	9	2	20	13	14	4	31	4	3	3	10	...	...	...	...	12	9	4	25	8	8	2	18	
Bombay ...	13	14	11	38	4	9	6	19	8	13	11	32	3	3	5	11	...	...	...	...	10	10	8	25	2	8	7	17	
Sind	3	6	1	10	2	3	1	6	3	6	1	10	1	2	...	3	...	...	...	.	2	4	1	7	2	3	1	6	
Berar	9	3	2	14	6	3	2	11	8	3	2	13	2	...	...	2	.	...	..	...	8	2	...	10	5	3	..	8	
Ajmere ...	1	1	3	5	1	1	3	5	1	1	3	5	...	...	...	...	...	...	.	...	...	...	3	3	...	...	2	2	
Coorg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	
Beluchistan ...	...	4	...	4	...	4	...	4	...	4	...	4	...	...	...	...	...	...	...	...	...	2	...	2	...	4	...	4	
TOTAL ...	107	100	121	328	47	66	96	209	85	92	109	286	34	21	21	76	...	...	1	1	83	72	89	244	43	62	69	174	

* NOTE.—For the sake of reference a list of all the witnesses entered in this column will be found in statement II.

No. II.

Statement of non-medical evidence.

Names of provinces.	Total of witnesses.			Deleterious. Moderate use.			Deleterious. Excessive use.			Not deleterious. Moderate use.			Not deleterious. Excessive use.			Insanity.			Impotency.			Remarks.
	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	Official.	Non-official.	Total.	
Bengal	99	93	192	42	44	86	73	66	139	28	26	54	.	...	.	52	46	98	18	16	34	
Assam	18	17	35	11	14	25	13	16	29	4	4	8	...		.	12	13	25	4	6	10	
North Western Provinces	73	87	160	20	68	94	41	73	114	12	5	17		..	...	23	36	59	19	22	41	
Punjab	31	40	71	19	31	50	24	33	57	3	2	5	..	..		14	23	37	11	14	25	
Central Provinces ..	34	39	73	9	20	29	15	29	44	8	12	20	...	1	1	1	1	2	6	16	22	
Madras	78	69	149	32	37	69	44	46	90	16	21	37	...	...		19	23	42	16	13	29	
Bombay	62	18	80	24	8	32	36	14	50	12	6	18	...		.	23	7	30	15	4	19	
Sind	14	11	25	7	8	15	10	10	20	4	3	7	...	...	...	6	2	8	4	5	9	
Berars	17	5	22	8	5	13	11	5	16	.	...	..		.	.	7	2	9	3	3	6	
Ajmere	...	2	2	.	.		1	...	1	1	...	1	...	.	..	...	..	...	...	...	...	
Coorg	2	...	2	..	1	1	.	1	1	...	...	...		...	.	...	1	1		1	1	
Beluchistan	3	...	3	...	...	...	...		...	...		...	.	...	.	...	.			...		
TOTAL .	431	381	812	17[illegible]	236	414	268	293	561	88	79	167	.	1	1	157	154	311	96	100	196	

45. It is desirable to describe here briefly the views and opinions of the Government of India on the effects of hemp drugs, which have been expressed from time to time.

(1) In 1873 the Government of India after making a full and complete enquiry resolved, in paragraph 15 of resolution No. 3773, dated 17th December 1873, that "there can, however, be no doubt that its habitual use does tend to produce insanity." The Government was so much convinced of its evil effects that they absolutely prohibited the use of ganja in the province of Burma from 1873-74 and desired all other local Governments to discourage the consumption of ganja and bhang by placing restriction on the cultivation, preparation, and sale.

(2) In 1875 on the 29th April the Government of India addressed the Government of Bengal and observed that "nothing should be done to place temptations in the way of the people that can possibly be avoided," and that "His Honor the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja and indeed if the use of the drug could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

(3) In 1877 the Government of Bengal passed a resolution which contains the following conclusions: "the Lieutenant-Governor has himself no doubt that the use of ganja in any form is injurious to the consumer."

(4) In 1879 Mr. A. O. Hume, Member of the Board of Revenue, North-Western Provinces, in his review on the Excise Report of 1879, remarked in paragraph 108 thus: "these drugs are believed to be exceedingly deleterious; the smoking of ganja constantly produces (the Junior Member has had many such cases before him) insanity. The most of our criminals habitually nerve themselves for crime by their use; their use amongst the people as a mass is asserted to have been entirely developed by our system, ..."

(5) In 1892 the Government of India in their letter No. 212, dated 9th August 1892, addressed to Her Majesty's Secretary of State, wrote that "we are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India," and that "we fully recognize it as our duty to restrict its consumption as far as practicable."

(6) There are hundreds of opinions expressed by the eminent officers of the Government who pronounced the use of ganja to be extremely deleterious. All the official literature on the subject between 1871 and 1891 is full of useful information in support of the above conclusion.

46. It seems also desirable to know the opinions which have been formed in other countries than India about the effects of these drugs, and therefore I give the following quotations—

(1) Report of the Indian Immigrants Commission of 1885-87, chapter II, paragraph 6: "In his report for 1882 the Protector called attention to the increasing habit of smoking it (*Cannabis*) amongst the immigrants; he averred that it was the cause of much sickness, suggesting that the plant should be destroyed and its use prohibited. Employers have been familiar, for many years, with the evils consequent upon its use by their Indian servants; they, the medical officers of circles, and the Protector of immigrants have seen many Indians with their strength and manhood wrecked by the pernicious drug. The opinions of those medical officers are on record. They are unanimous in thinking that the

smoking of hemp is injurious to the constitution of Indians, and the majority testify to the widespread habit of smoking it. To its use they attribute unsteadiness in the performance of work, incapacity for exertion, undermining of nervous power, heart-disease, asthma, retention of urine, night blindness and amaurosis, ncoherent speech, mental imbecility, hallucinations, suicides, death. Even in the milder cases an individual under the influence of hemp is listless, his eyes are glassy, suffused, and have a vacant stare, he has no disposition to exert himself, his pulse is soft and weak, he complains of languor and debility. Frequently, men intoxicated by its fumes, become dangerous and are arrested by the police. Homicides are committed by men rendered furious by its toxic properties. We ourselves, when visiting an estate in the Umzinto circle whereon Indians were employed, came, upon an Indian, an absentee from work, sitting outside a hut, with his dakkha (which is a synonymous term for ganja—*vide* part I of the above report), pipe on the ground by his side. He muttered to himself, then yelled, spoke rapidly and incoherently, lapsed into silence, then yelled again, and it was impossible to make him understand anything. He was manifestly in a state of dementia induced by dakkha-smoking: he was decidedly dangerous, and the manager was uncertain how to deal with him; finally, the man was left to do as he pleased, the Indians on the estate being afraid to interfere with him, and the manager knowing that the law provided no punishment for his misconduct." Paragraph 7, "We are satisfied, from the documentary and oral evidence before us, (*a*) that the smoking of hemp, whether by itself or in the mixture to which we have referred, is detrimental to the health of Indian immigrants in this colony, (*b*) that the immoderate use of it is highly injurious, (*c*) that the habit of smoking it in excess is widespread, in the Pietermaritzburg circle one-fifth probably of the Indian population smoking it in excess, (*d*) that such immoderate use leads to crime of the most serious nature, (*e*) that it renders the Indian immigrants unfit and unable to perform, with satisfaction to the employer, that work for which he was specially brought to this colony."

(2) Report of the Sanitary Board of Greece appended to the Circular No. 22, dated 27th March 1890, of the Kingdom of Greece (see Abkari, April 1893, page 79).

"Careful scientific observation in warm countries (in Africa, Persia, India, and Turkey) in which the intoxicating qualities of the Indian hemp, and of the haschisch which is manufactured from it in various forms, have long been known, and its use widely prevalent, has long ago proved the disastrous effects produced by the use of haschisch.* From the observations made in India by English doctors (O'Birest, Raleigh, O'Shaugnėssy, Esdade) [*sic*], the experiments of Léautano, the observations of Mongieri, the numerous experiments of M. Morean (of Tours), and his observations during his journey in the East, the experimental researches of Von Schroff and Froumüller, and observations of other inquirers, the following safe conclusions are drawn :—

"(*a*) That haschisch disturbs the functions of the systems of digestion and circulation;

"(*b*) That it injures the sense and motive powers;

"(*c*) That it disturbs the cerebral functions;

* NOTE.—Hemp is called haschisch in Arabic, as shown in paragraph 80 of this note.

"(*d*) That the action of haschish manifests itself differently in different persons;

"The action on the circulation of the blood sometimes causes syncope, and the disturbance of the cerebral functions produces mania. The disturbances of the nervous system caused in the animal economy by the use of haschish are peculiar. The phantoms seen by, and the tendencies manifested in those who are intoxicated with haschisch, generally indicate the usual habits of thought and moral character of the intoxicated persons, or the thoughts and passions by which the man was possessed on the day that he became intoxicated, or at the moment in which the symptoms of poisoning began to make themselves manifest. Persons given to the use of haschisch, who become maniacs, are apt to commit all sorts of acts of violence and murders.

"Such being the action of haschisch, it is easy to understand why, among rogues and convicts, quarrels, violence, and murders are of common occurrence, and how dangerous is the use of haschisch by this particular class of people.

"Sometimes the intoxication of haschisch impels the person under its influence to suicide, or the commission of acts forbidden by morality.

"All authors are unanimous, basing their opinion on numerous observations among Eastern peoples, that the long use of haschisch weakens the body and causes atrophy, dulls the mind, and creates hypochondria, idiocy, and mania. Those who indulge in haschisch have a fixed look, without expression, and an idiotic appearance. According to statistical information obtained from lunatic asylums of Cairo and Bengal, the majority of the maniacs and idiots became such from abuse of haschisch.

"It is therefore indisputable that the use of haschisch has a disastrous effect, gradually undermining the health of body and spirit, and becoming a source of evil to society."

(3) Note on immigration from India to Trinidad, 1893, page 43, paragraph 28: "Under the influence of Indian hemp Malayas run 'amock' and kill every one they meet. There is ample evidence that persons strongly under the influence of hemp have, if their passions are aroused, an irresistible inclination to kill, regardless of all consequences. When I was on active service during the Afghan campaign, 1878-81, many furious charges were made on our troops by bodies of 'Ghazis' who, under the influence of overwhelming excitement, rushed madly to the attack and continued to fight against any odds, until they were all killed. These men, I have no doubt, were temporarily mad from hemp."

47. *Mental effects—Insanity.*—In all the 24 asylums of India 1,344 lunatics were admitted in 1892, of which 222 were attributed to ganja, 553 to other causes, and for the remaining 569 the cause was "unknown." A fresh enquiry was directed by the Commission about the cases ascribed to ganja, while the rest were left alone. This procedure appears to me objectionable.

48. Under section 4 of Act XXXIV it will be found that the Magistrates and Civil Surgeons have been made responsible for making enquiries about lunatics. Under section 3 of the same Act the visitors, consisting of at

least one medical officer, are required every month to "see and examine (as far as circumstances will permit) every lunatic therein (*i.e.*, in the asylum) and the order and certificate for the admission of every lunatic admitted since the last visitation of the visitors."

Thus it is clear that the entries are made and examined by the most trustworthy servants of the Crown, and therefore their accuracy cannot be questioned but on a very strong evidence.

49. Though in some cases the descriptive rolls were originally filled by the police, yet they should not be rejected.

First.—Because the Magistrates of the districts who always take necessary precautions before accepting the police reports have accepted them.

Secondly.—There can be no other agency in bringing to light the history of a lunatic than the police, because ganja-smokers are generally men of low caste and of bad character, with whom the high officers cannot be in touch. The habit of ganja-smoking is looked down, and therefore those who use ganja smoke it secretly, trying their best to conceal the fact from their elders and from their society.

Thirdly.—There was no motive, nor has any been assigned, which might have induced the police to make wrong entries. Therefore their entries should not be rejected. Surgeon-Lieutenant-Colonel O'Brien, of Benares, witness No. 80, North-Western Provinces, says, "when ganja is assigned, the man was probably a notorious ganja-smoker. The enquiry may be conducted by a chaprasi, yet he might be right in that." Surgeon-Major J. W. Macnamara, witness No. 20, Assam, says (in oral) : "My idea of the reliability of the information rests entirely on the fact that the police have no inducement to report falsely. On the whole, then, I think that when the police ascribe insanity to ganja it may be fairly accepted as reliable." Surgeon-Major K. R. Kirtikar, witness No. 73, Bombay, 16 years' service, says in oral 46: "If the police tell me the cause, I send myself for the relations who have given the police the information and examine them myself. I make then my entry as to cause. If I cannot get the relatives I show the cause 'unknown.' If the police knew personally the habits of the man, then I would accept their statements, but not otherwise. If the police give me information as to cause which is the result of enquiry, I reject that; for in such scientific enquiries I consider it necessary to have information at first hand."

Fourthly.—If there was any motive for the police to show wrong causes in the descriptive-rolls, there could not have been so many cases as 569, which are entered in column 29 of unknown cases in Statement VII for 1892. This shows that the enquiry was made carefully, and that the cause of ganja was attributed only when it was proved to be so.

Fifthly.—There are certain marks and signs by which a ganja or charas smoker can be easily distinguished, such as the redness of eyes, a red mark on the hand and thumb, and the general appearance of the smoker to which the medical officers must have paid some attention before accepting a lunatic as one affected

by ganja. Surgeon-Lieutenant-Colonel A. Crombie, witness No. 104, Bengal, says: "Besides this there is the mark on the hand and thumb of the ganja-smoker which, if present, immediately distinguishes him as a habitual smoker." Surgeon-Lieutenant-Colonel Meadows, witness No. 101, Bengal: "I think the general appearance is more typical than anything else—the appearance of the eyes and his excitable irritational manner. With these symptoms I think I should be able to tell a case as one of hemp drug insanity even without history of the use of the drug."

50. As regards para. 517 of the Report, I would remark that the attention of the Indian newspapers and of the House of Commons, the Secretary of State, and of the Government of India was drawn in 1891 to the fact that the lunatic asylums of India were filled by the ganja insanes. Accordingly an official enquiry was instituted lasting from 6th August 1891 to 9th August 1892. Under these circumstances, it cannot be said that the responsible officers did not take sufficient care in having the descriptive-rolls and asylum registers filled with accuracy. Surgeon-Lieutenant-Colonel Meadows, witness No. 101, Bengal, says in his oral: "We do not now accept the cause thus assigned so readily as we used to do. Since attention has been so much attracted to ganja during last year we are much more careful."

51. In 1893 this Commission was appointed, and it should be presumed that the entries of 1893 were made with all possible care. The following table shows the figures for 1892 and 1893 taken from statement VII. It will be seen that the figures of 1893 fully support those of 1892.

Province.	Total of admissions.		Cases attributed to hemp drugs.		Percentage.		Remarks.
	1892.	1893	1892.	1893	1892	1893.	
Bengal	186	205	53	56	28 4	27·3	
Assam	43	35	13	7	30·2	20·0	
North-Western Provinces...	284	271	52	72	18·3	26·5	
Punjab	132	122	22	28	16·2	22 9	
Central Provinces ...	62	78	13	17	20·9	21 7	
Madras	245	211	19	25	7·7	11 8	
Bombay	290	275	47	31	16·2	11·2	
Burma	102	69	3	2	2·9	2 8	
TOTAL ...	1,344	1,266	222	238	16 5	18·7	

52. The following is an abstract of statement VII for the last 20 years taken from the Lunatic Asylum Report of Bengal for the year 1892, which also corroborates the entries of 1892. The percentages given in this statement by the Government are upon the total admissions of the year; but perhaps it would

have been better if these percentages had been based on the number of those cases only the cause of whom was known as discussed in paragraph 55 of this note :—

Year.	Number of admissions and re-admissions	Number alleged to have been caused by			Percentage of column 3 on column 2.	Percentage of column 4 on column 2.	Percentage of column 5 on column 2.
		Ganja and bhang (Statement VII).	Opium (Statement VII).	Spirits (Statement VII).			
1	2	3	4	5	6	7	8
1873	514	171	6	22	33·2	1·1	4·2
1874	501	215	1	16	42·9	·19	3·1
1875	418	176	2	16	42·1	·47	3·8
1876	366	143	2	17	39·	·54	4·8
1877	285	107	3	13	37·5	1·05	4·5
1878	227	90	3	5	39·6	1·3	2·2
1879	196	61	2	6	31·1	1·02	3·
1880	216	65	...	10	30·	...	4·6
1881	213	69	2	13	32·3	·93	6·1
1882	188	66	...	10	35·1	...	5·3
1883	232	76	1	18	32·7	·43	7·7
1884	232	63	...	12	27·1	...	5·1
1885	232	59	1	11	25·4	·43	4·7
1886	218	57	...	7	26·1	...	3·2
1887	181	54	...	10	29·8	...	5·5
1888	238	63	1	11	26·4	·42	4·6
1889	247	69	1	19	27·9	·4	7·6
1890	221	56	2	7	25·3	·9	3·1
1891	213	54	2	7	25·3	·94	3·2
1892	186	53	1	10	28·4	·53	5·3
1893	205	56	...	...	27·3	...	...

53. A large proportion of the 222 ganja cases of 1892 consists of lunatics charged with crime, who were acquitted on the ground of insanity. Such insanes are admitted in the asylums, and the cause is generally taken from the judgment of the court as stated by Dr. McKay, witness No. 36, Central Provinces "In criminal cases the cause is taken generally from the judgment of the court." Dr. Crombie, witness No. 104, Bengal, says, "Besides (the descriptive-roll) we have (but only in criminal cases) the judgment in which the

point is frequently raised and discussed as part of the defence." It is true, as argued in paragraph 518 of the Commission's Report, that it was unnecessary for the court to make special enquiry as to the cause of insanity, but it was quite natural that when the court acquitted an accused on the ground of insanity, it must have made a full enquiry into his character and habits of life and satisfied itself as to the cause of insanity before passing final orders. Besides that, if ganja would have been wrongly given as the cause, most probably the complainant in the case would have been the first to make objection to it. In Bengal out of 53 ganja-admissions in 1892, there were 22 criminal lunatics, but only 21 (criminal and non-criminal) cases out of 53 have been accepted. This shows that some of the criminal cases also have not been accepted.

54. The fresh enquiry is not satisfactory on the following grounds:—

(1) In 1892 the number of admissions in all the asylums was 1,344, out of which 222 were ganja cases, 553 attributed to other causes, and 569 were entered as unknown. The fresh enquiry has been confined to the 222 cases and is therefore defective. When out of 222 cases 124 have been found due to causes other than ganja and consequently rejected, it can be contended on the same ground that the remaining 1,122 cases, for which other causes than ganja have been attributed in statement VII, contain a good many ganja cases. The object of the Commission was to know the exact number of ganja cases admitted in 1892, and the actual percentage could have only then been ascertained had the present fresh enquiry been extended to all the admissions of 1892.

(2) This enquiry has been made by the same agency as before, and not by any member of the Commission as would appear from paragraph 521 of the Report. Therefore, if the former enquiry is questioned, the present one cannot also be relied upon. The Commission themselves have made the following observations in paragraph 526 of the Report:—"The method of enquiry has not been satisfactory in regard to all the cases referred for local enquiry." "In some it will be observed even this further inquiry has been left to the police." I for one would say that this second enquiry, if it has resulted in anything, has thrown still greater doubt on the subject, for while the former reports were made by the police unfettered with any bias, now they created for themselves that Government is inclined to reduce the number of ganja lunatics and so they might have done not a little to understate the true number. This remark of mine will, I hope, be fully admitted by all officers who have had some experience in India.

(3) Statement No. VI shows the types of insanity as diagnosed by the medical officers of the asylums, who are personally responsible for the accuracy of entries in the above statement, as Dr. DeFabeck, Surgeon-General with the Government of Madras, witness No. 83, says: "Diagnosis of hemp drug insanity does not depend solely on history. I consider that it is the duty of the medical officer to observe the case and base his diagnosis on the facts he observes and those he may elicit from the insane in lucid intervals." The total number of diagnosed cases of toxic insanity is 157, but the cases accepted by the Commission fall short of this figure also. The following figures are taken for the ganja cases, and they prove that the number of accepted cases in the Report is apparently wrong. The number of ganja cases as diagnosed in statement VI in 1892 is 157, but only 98 cases are accepted.

Name of province.	Total admissions in 1892.	Cases attributed to hemp drugs in 1892 in statement VII.	Cases diagnosed as due to hemp drugs in statement VI in 1892.	Cases accepted by the Commission.	PERCENTAGE.	
					Column 5 to 2.	Column 4 to 2.
1	2	3	4	5	6	7
Bengal	186	53	40	20	10·7	21·5
Assam	43	13	13	3	6·9	30·2
North-Western Provinces	284	52	30	22	7·7	10·5
Punjab	132	22	23	14	10·6	17·4
Central Provinces ...	62	13	2	5	8·0	3·2
Madras	245	19	2	7	2·8	·8
Bombay	290	47	45	24	8·2	15·5
Burma	102	3	2	3	2·9	1·9
TOTAL ...	1,344	222	157	98	7·3	11·6

Note.—Here a question may arise that, according to statement VII, the total admissions of ganja cases are 222, while in statement VI only 157 cases are shown to have been diagnosed as ganja cases, and that in view of so vast a difference, if the latter statement is taken as correct, the former must be wrong. But the fact is that these 157 cases out of the 222 cases are those entered in statement VI in the column of toxic insanity, while the rest are entered in the column of mania, etc., as will be seen from paragraph 527 of the Report, where out of 98 accepted cases only 39 are shown as entered in statement VI in the column of toxic insanity and the others in mania, etc.

(4) As will be seen from paragraph 521 of the Report, that out of 222 ganja cases 124 have been rejected. In my opinion many of them have been rejected on insufficient grounds. I pointed out some such cases to my learned colleagues Mr. Fraser and Dr. Warden, who were in charge of this part of the enquiry, but they were not formally discussed in any meeting of the Commission when the report was under discussion. There is a case in which the lunatic when he became sane admitted the use of ganja in presence of Dr. Meadows, Superintendent of Berhampur Asylum, but still the case has been rejected. In another case the lunatic's own brother gave the information that the lunatic was addicted to ganja. (See Lunatic Asylum, Lucknow, case No. 1). In a third case a lunatic's brother-in-law stated that the lunatic was addicted to ganja, and the lunatic was made over to him. (See Lunatic Asylum, Agra, case No. 10). Many cases have been rejected which were attributed to hemp drugs by the Superintendents of Asylums even after the fresh enquiry. The Superintendents had all the papers of the lunatic's past history before them, and I think they were in a better position than the Commission to observe the case and form an opinion as to the cause of insanity.

(5) The fresh enquiry produced great suspicion in the mind of the public, and the people apparently avoided giving true facts of the lunatics to the enquiring officers, lest they themselves might be thrown into some difficulties.

(6) Out of 1,344 admissions of 1892 the cause of insanity in statement VII was shown for 775 cases only, and in 569 the cause of insanity was "unknown." It cannot be denied that among this number of "unknown" cases there must be some ganja cases which were not ascertained; therefore the percentage has been wrongly taken on total admissions. It should have been taken on the number of known cases only, *i.e.*, on 775.

(7) Consumption of ganja is prohibited in Burma, and it was quite wrong to take the admissions of Burma Asylum into account, as it materially affects the totals and percentages.

55. In my opinion, though there might be a few mistakes, yet on the whole it would be fair to accept the entries of statement VII as correct for the basis of forming an opinion. In the following table I have therefore given the full number of 1892 and calculated the percentages on the number of known cases only:—

Provinces.	Admissions.			Cases attributed to hemp drugs.	Cases attributed to liquor.	Cases attributed to opium.	Percentages.		
	Cause "known."	Cause "unknown."	Total.				Column 5 to column 2.	Column 6 to column 2.	Column 7 to column 2.
1	2	3	4	5	6	7	8	9	10
Bengal	115	71	186	53	10	1	46·0	8·6	·08
Assam	19	24	43	13	3	1	68·4	15·7	·52
North-Western Provinces	127	157	284	52	11	6	40·9	8·6	4·7
Punjab	63	69	132	22	2	1	34·9	3·1	1·5
Central Provinces ...	30	32	62	13	...	...	43·3	...	...
Madras	204	41	245	19	7	5	9·3	3·4	2·45
Bombay	184	106	290	47	21	1	25·5	11·4	·54
TOTAL ...	742	500	1,242	219	54	15	25·5	7·2	2·0
Burma	33	69	102	3	14	1	...	...	...
GRAND TOTAL ...	775	569	1,344	222	68	16	...	...	...

56. A perusal of Lunatic Asylum Reports for 1892 and of the previous years, clearly shows that—

(1) The percentage of ganja lunatics is extremely high when compared with those caused by other intoxicants used in India, as will be seen from the statement in paragraph 55 and that of 20 years past in paragraph 52 of this note.

(2) It is higher than the percentage of insanity due to liquor in England, which is only 19·2 per cent.

(3) Ganja and charas are more deleterious than liquor or opium, etc.

(4) There is a close connection between crime and ganja-smoking. In Bengal, where ganja is largely used, it is found that 41 per cent. of ganja lunatics are criminals; the table of this will be found in paragraph 63 of this note, where crime is dealt with.

(5) The percentage of ganja lunatics is much higher in those provinces where its cultivation is extensive, and consumption greater, than the percentage in other provinces, like Madras, Bombay, etc., where it is less cultivated and used, or in Burma, where it is totally prohibited.

57. *Census and insanity.*—It will be evident from the statement given below, that in 1892 the whole population of lunatic asylums was 5,581, out of which 837 were due to ganja. The Census Report of 1891, Volume II, page 59, shows that the whole number of insanes in India was 74,470. If the rate of ganja lunatics to the population in the lunatic asylums be applied to the total number of insanes in India it would be found that the insanity of about 11,168 persons in India is due to the use of hemp drugs. Again out of 5,581, the total population of all the asylums, 222 new cases due to hemp drugs were admitted in 1892, and by this calculation about 2,962 persons annually turn insane by the use of hemp drugs.

Population of lunatic asylums.

Province.	TOTAL POPULATION.			CASES DUE TO HEMP DRUGS.		
	Remaining at the end of the year 1891.	Admissions of 1892.	Total.	Remaining at the end of the year 1891.	Admissions of 1892.	Total.
Bengal	963	186	1,149	174	53	227
Assam	111	43	154	21	13	34
North-Western Provinces ...	1,007	284	1,291	154	51	205
Punjab	340	132	472	60	23	83
Central Provinces	261	62	323	36	13	49
Madras	592	245	837	44	19	63
Bombay	709	290	999	109	47	156
Burma	254	102	356	17	3	20
Total ...	4,237	1,344	5,581	615	222	837

58. The above conclusions are corroborated by the evidence of witnesses before the Commission, as will be seen from the statements in paragraph 44 of this note, where 244 medical and 311 non-medical witnesses pronounce the use of ganja and charas to be a direct or indirect cause (or, in scientific language, predisposing or exciting cause) of insanity. I have not ventured to take up the scientific view of the question and leave it for medical experts.

59. For the purpose of ascertaining the effects of the hemp drugs, the medical evidence deserves special attention, and I would therefore recommend to read it *in extenso* as appended to the Report. Its analysis is given in paragraph 44 of this note and a list of those witnesses who said that even the moderate use of the drugs is deleterious will be found in statement II of this note. For brevity sake I have given a few quotations of Bengal and Punjab witnesses only as typical instances in statement III; in the former province *ganja* and in the latter *charas* being chiefly used. As to the comparative value of the evidence of medical men of different grades paragraph 494 of the Report should be read.

60. *Moral effects.*—It is concluded in paragraph 552 of the report that the hemp drug's "moderate use produces no moral injury whatever," and that "there is little or no connection between the use of hemp drugs and crime."

I do not share in the above opinion, and hold on the contrary that the use of ganja and charas causes distress to the consumer and the members of his family and has a direct or indirect connection with crime and bad habits.

61. *Distress.*—It has been admitted that the consumers are chiefly the labouring classes and the beggars. The average of wages of the former in Bengal is 4 annas a day, while the latter are only a burden on the society.

It has been shown in paragraph 8 that the average dose of a moderate consumer is one-fourth tola a day, and for an excessive one tola a day, which would cost in Bengal (at the rate of Rs. 20 a seer as accepted in the Report) one anna to the moderate, and four annas to the excessive consumer. Now it can be better imagined than described what should be the distress of the family of the consumer who spends not less than one-fourth of his income on this drug. Whether the consumer can provide food for himself, his wife, and children or not, but he is sure to provide his stimulant by legal or illegal means. Moreover, almost all the witnesses unanimously pronounce that the use of these drugs requires plenty of milk and rich food to modify their evil effects. But there is scarcely one per cent. of the consumers who can provide to feed himself properly.

In the Excise Report of 1891, paragraph 12, the Hon'ble Mr. McKay, Member of the Board of Revenue, N.-W. P., remarked that "the consumption of hemp drugs does not depend so much upon season as it does in the case of liquor. Drugs are much cheaper than liquor, and a drug consumer would reduce his food sooner than do without his accustomed stimulant."

62. *Crime.*—It is a remarkable fact that as the number of ganja smokers in the lunatic asylums of Bengal is as high as 46·5 per cent. of the admissions in 1892 (as mentioned in paragraph 55 of this note), the number of criminals in the above ganja cases is not less than 41·5 per cent. This fact alone clearly proves that the use of ganja produces insanity of such a type as mostly leads its victims to crime. This will be seen from the following statement which gives figures for the last 5 years for the Province of Bengal:—

Year.	No. of cases attributed to hemp drugs in Statement VII.			Percentage column 2 to column 4.	Remarks.
	Criminals.	Non-criminals.	Total.		
1	2	3	4	5	6
1889 ...	25	44	69	36·2	
1890 ...	18	48	66	27·2	
1891 ...	14	40	54	25·9	
1892 ...	22	31	53	41·5	
1893 ...	27	29	56	48·2	
TOTAL ...	106	192	298	35·5	

63. When I take into consideration the cause of insanity of all the criminals admitted in the lunatic asylums, I find that even among them the percentage of those criminals whose insanity was due to the use of hemp drugs is as high as 41·0

per cent. of the known cases. As the reports of the lunatic asylums of Bengal are more complete than those of other provinces, and the consumption of ganja is greater there, I give the following statement for Bengal for the last 5 years. The lunatic asylum reports of other provinces cannot be relied upon, because sometimes criminal lunatics are not sent to the asylums for want of accommodation, but to central jails, as is the case in the North-Western Provinces.

Extract from Statement VII.

Year.	CRIMINAL LUNATICS ADMITTED.			CRIMINAL LUNATICS ATTRIBUTED TO			PERCENTAGE.			REMARKS.
	Cause "known."	Cause "unknown."	Total.	Hemp drugs.	Opium.	Spirits.	Column 5 to column 2.	Column 6 to column 2.	Column 7 to column 2.	
1	2	3	4	5	6	7	8	9	10	11
1889 ...	59	49	108	25	...	6	42·4	...	10·2	
1890 ...	45	54	99	18	2	1	40·0	4·2	2·2	
1891 ...	41	50	91	14	2	3	34·1	4·9	7·3	
1892 ...	55	43	98	22	1	6	40·0	1·8	10·9	
1893 ...	58	45	103	27	1	...	46·6	1·7	...	
TOTAL ...	258	241	499	106	6	16	41·09	2·3	6·2	

64. Most of the witnesses pronounce a direct or indirect connection between the hemp drugs and crime, which can be ascertained on referring to the evidence of witnesses in reply to questions 51 to 55. I give a few quotations of some eminent witnesses who have had opportunities of observing the matter under discussion in statement IV.

Hemp drugs compared with alcohol.

65. In paragraph 490 of the Report an allusion is made to the comparison of evil effects between the hemp drugs and liquor, but no definite opinion has been expressed therein. I believe there can be no doubt that ganja, charas, and liquor are all deleterious. The difference lies in degree and quality of the intoxication. It is to be noticed that there are many natives of social position, learning, and intellect, who either openly or secretly use liquors, but their brains are not spoiled. Almost all the European gentlemen in this country use liquor, but the superiority of their intellect and learning can in no way be doubted. On the contrary, not a single man of learning and position will be found among those addicted to the use of ganja and charas. This clearly shows that the use of these drugs should have more injurious effects upon the brain than alcohol. Besides this liquor is a kind of tonic, and gives strength to the body, while ganja and charas can give no such strength. It is observed that alcohol produces its bad effects only when used in excess, while the smoking of hemp drugs acts upon the brain even when used in the smallest dose.

The percentages of insanity caused by liquor, opium and hemp drugs in Bengal are given in a statement in paragraph 52 of this note for the last 20 years,

and they clearly show that the hemp drugs are the most potent factors of all intoxicants in producing insanity. The following table shows the percentages as accepted in paragraph 524 of the Report and they also confirm this view.

Province.	Percentages as shown in paragraph 524 of the Report.	
	Hemp Drugs.	Spirits.
Bengal	10·7	2·1
Assam	6·9	6·9
North-Western Provinces	7·7	3·5
Punjab	10·6	1·5
Central Provinces	8·0	...
Madras	2·8	2·8
Bombay	8·2	7·2
TOTAL ...	7·8	3·4

The following quotations are also noteworthy :—

(1) North-Western Provinces, witness No. 6, Mr. Stoker, Excise Commissioner, oral 44, "I put these drugs above liquor and opium in their injurious tendencies."

(2) North-Western Provinces, No. 8, Mr. H. Fraser, Collector and Magistrate, "I wish it were, as I believe alcohol to be very harmless in comparison." "These stimulants (spirits and opium) as far as I have seen are exceedingly harmless or do exceedingly little harm, and I think the greatest watch fulness is necessary to prevent excessive cost of these articles driving consumers to the use of the cheapest hemp drug."

(3) North-Western Provinces, No. 34, John Cockburn, Sub-Deputy Opium Agent. "All smoking is in my opinion injurious, and the use of ganja and charas in that way is not comparable with the drinking of liquor."

(4) North-Western Provinces, No. 16, P. Allen, Collector. "In my opinion excessive consumption of all hemp drugs is more injurious than of alcohol, and if I considered that consumption was on the increase I should lighten taxation on liquor."

Oral—"My experience is that alcohol is not productive of much harm in this district."

(5) Bombay, No. 1, Honourable T. D. Mackenzie, Commissioner of Opium, &c.—"I do not think the labouring classes who use the drugs would take to dhatura. They would rather take to alcohol. I think this would probably do less harm; the liquor being toddy or

spirit of good quality such as is supplied from central distilleries, than the hemp drugs."

(6) Bombay, No. 38, W. Almon, Assistant Collector, Abkari, "Generally then my impression is that there are more wrecks from ganja than liquor in proportion to the number of consumers, but not actually more."

66. *Native States.*—A number of question papers were supplied to selected persons in the Native States and 125 replies were received. It was unanimously resolved by the Commission that the replies of witnesses from the British territory should be appended to the Report, but as to the evidence of the Native States it was proposed that they should not be so dealt with. After some written and oral discussions all the four official members voted for the proposal and all the three non-official members against it. Therefore the evidence from the Native States has been omitted from the Report.

Evidence from Native States and Army.

The area and population of the Native States are so considerable that they should not be lost sight of. Native State evidence, generally speaking, corroborates that from the British territory, and very strongly shows that the use of ganja and charas is very deleterious, that it is much in disrepute, that it is not connected with any social or religious custom, that prohibition is desirable and feasible, and that the English system of excise administration has been and is likely to be followed in the Native States. An analysis of the opinion of medical men will be seen from the following table:—

—	Total Number of Medical Witnesses.				Deleterious.								Not Deleterious.								Insanity.				Impotency.				Remarks.
					Moderate.				Excessive.				Moderate.				Excessive.												
	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	Superior.	Subordinate.	Private Practitioner.	Total.	
Native States...	33	11	10	54	20	9	7	36	28	11	9	48	6	3	2	11	...	...	...	...	15	8	4	27	15	5	5	25	

Some of the witnesses are themselves Chiefs and others are responsible officers and eminent physicians of the States. I give below a few extracts to show the tendency of the evidence in a general way.

Hyderabad, witness No. 9.

T. Streenivasa Rao, Hakeem, His Highness the Nizam's Civil Medical Department:—"As they advance in age, moderate habitual consumers become victims to the noxious effect of hemp plant morally, mentally, and physically. It impairs the constitution, injures digestion, and causes anaorexia. Smoking ganja has reduced many strong men to the lowest ebb. I mean moderate smoking. Bhang and ganja induce habits of immorality or debauchery when the consumer

is still in good health. Many authors in *Unani* medicine, such as Boo Ali Sena, Ibenni Byttar, Jali Noos, Mahomed Hussun Sherazi, and others denounce the habitual use of hemp plant as aphrodisiac in one voice, as its long continued use dries up seminal fluid, and the consumer becomes impotent."

Bhawulpur, witness No. 1.

Jind Wadda Khan, Finance Minister :—"The use of intoxicating drugs is prohibited by religious injunctions. Similarly persons of every class regard its use as unlawful."

Laharu, witness No. 1.

Nawab Ameeruddin Ahmud, Khan Bahadur, C.I.E., Chief of Laharu:—"Whatever answers I have given to the above questions, they are the focus of my information, enquiries, and observations, and now the gist of my opinion is that the use of these three drugs and liquor has very badly affected the morals, health, and the finances of the public of this country, the noblemen of which have been rendered incapable of discharging their duties on account of excessive drinking. Thousands have been doomed to death by this evil; and it is not only the gentry, but also the lower and the middle classes who have been ruined by the use of these intoxicants. I am of opinion that the matter of these intoxicants requires serious consideration."

Nabha, witness No. 1.

Sayad Wazir Ali and L. Deva Singh, officials of the Nabha State :—" In this State bhang alone is sold for medicinal use, etc. The use of ganja and charas being prohibited, no leases are given."

Rajputana, witness No. 2.

W. H. Neilson, M. B., Surgeon-Captain, Medical Officer, Erinpura Irregular Force :—" The moderate use of bhang produces no noxious effects. The even moderate use of ganja and charas has a most deteriorating effect physically, mentally, morally on the subject of the habit."

Bhor (Bombay), witness No. 1.

Chief of Bhor (Bombay) :—" It is feasible to prohibit the use of any or all of these drugs if its non-cultivation be enforced. The prohibition would not occasion any serious discontent among the consumers, nor would the discontent, if any, amount to any political danger. The prohibition would not necessitate the use of any other drugs."

Mysore, witness No. 1.

Brigade-Surgeon-Lieutenant-Colonel I. J. McGann, Senior Surgeon and Sanitary Commissioner with the Government of Mysore :—" Habitual moderate use of ganja affects the system physically, mentally, and morally, produces emaciation, impairs appetite, and sometimes dysentery or bronchitis. It impairs the moral sense to a certain extent, induces laziness, and tends to produce insanity. It excites insanity as well as predisposes to it."

67. *Army.*—A separate set of selected questions was framed for the Native and British Army by the Commission and, after the permission of His Excellency the Commander-in-Chief, circulated for answers; 274 statements were received.

The Commanding Officers were instructed by the Commission thus:—"It is suggested that Commanding Officers should, in replying to these questions, freely consult the medical officers in charge and native commissioned and non-commissioned officers. Questions 45 and 46 should be answered by medical officers."

Just as it was the case about the evidence of the Native States mentioned in para. 66 of this Note, it was proposed that the Army Evidence also should be rejected and not appended to the Report. All the official members and Kunwar Hurnam Singh Ahluwalia voted for it, and thus by a majority of 5 to 2 members the motion was carried out. In para. 409 of the Report some allusion is made to the evidence of Army as to the extent of use. The following sentences are quoted from the above paragraph:—"Several inquiring officers report that their men will not admit the use of the hemp drugs, though it is certain that they are taken to some extent, and in many cases there are special reasons for reticence in addition to the disrepute attaching to the habit in native society generally. In some regiments the use of the drug is directly prohibited and in others the Commanding Officers, though they may not have gone to this length, regard the consumers with distrust. It must be the case also that in some regiments the consumers are held in greater disrepute among their comrades than in others." It is clear from the above that the use of hemp drugs is disreputable in the Army as badly as elsewhere, and that their officers were so much convinced of their bad effects upon the physical, mental, or social condition of their soldiers that they directly or indirectly prohibited their use.

In the Report no notice was taken of the opinions expressed in the Army Evidence about the effect of the hemp drugs; but I think that this opinion has a particular advantage, and should be preferred to that of other witnesses. The Army men are always healthy and strong; have sufficient means to properly feed and clothe themselves; have got healthy accommodations to live in and agreeable exercise to undergo. They are under close observation of their officers and cannot conceal any fact from them.

The answers to the question papers received from each regiment, were generally drawn up after consultation with the medical officers. I believe the opinion of the Army Medical officers about the effects of the drugs should have much weight: out of 274 Army witnesses, some are silent on the question of effects, but most of them have expressed an opinion, and I find from examination that 174 of them pronounce the use of the hemp drugs to be extremely deleterious.

68. Before discussing the question of the policy in regard to the hemp drugs, to be adopted in future, it seems desirable to describe here briefly the past history of the excise administration in India, and therefore I begin it from the Hindu period.

Prohibition.

69. Manu Smriti or the Institutes of Manu is the greatest authority on Hindu Law. In Chapter VII are enumerated the different taxes and revenue which alone the king is authorized to collect. A tax on an intoxicant is not mentioned therein, and therefore it is not legal for a king to levy a tax on these intoxicants. Besides Manu Smriti, I have consulted almost all the other standard Smritis, and find that all of them follow the principle laid down by Manu, as described above.

(*a*) The manufacture and sale of spirituous liquors were expressly prohibited, and it was ordained "that distillers and sellers should be banished from the realm of a king as they are secret thieves and harass the subject by their ill deeds." (See Chapter IX, Sloke 225 and 226 of Manu Smriti).

(*b*) In view of these orders for spirituous liquors, which are not more deleterious than ganja and charas (*vide* paragraph 65 of this note), it must be concluded that the use and sale of these drugs are equally if not more stringently prohibited.

70. As to the Mahomedan kings of India, in Gladwin's translation of the Ayeen Akbari, paragraphs 288-289, there is a list of taxes which were remitted by the great Moghul, *Akber*, among which were taxes on salt and spirituous liquors.

(*a*) Even such a king as *Aurungzeb* did not commit himself to the taxing of intoxicants. On one occasion his grandson proposed to tax the palm juice, *i.e.*, *tari*, which was used as an intoxicant, and asked the permission of his grandfather to do so. The king's reply is found in his own letter No. 90 in his letters-book called " Ruqaat Alumgeri." Its translation stands thus:—

" Though the establishment of a mart for selling tari (palm juice) may lead to the collection of revenue, yet it is impossible to sanction such revenue. I cannot understand what a dishonest Mufti (legal adviser) declared it legal to do so. You must know that such ill-advisers are your enemies in this world and the next. You must thank Almighty God who has put you in possession of three provinces, which are very rich and give much revenue, and in which every thing is abundant and cheap. You should know that the good-will of the subjects is the only wealth either in this world or in the next."

(*b*) Following the same principle of the Mahomedan law, the Mahomedan prince of Kathyawar has stopped the practice of farming out contracts for spirits on the ground that it is opposed to the tenets of the Mahomedan religion to derive any revenue whatsoever by letting out contracts for liquors (see Abkari for July 1893, page 107).

71. It appears that up to the year 1790 the taxes on spirituous liquors were collected by the zemindars, and that "complaints were then rife about the spread of drunkenness among the lower classes of the people."

These complaints apparently decided the Government upon the resumption of the sayer on spirituous liquors. Accordingly, "on the 19th April 1790, the Government resolved on *moral grounds* to resume the Abkari sayer without reference to other duties." (Report of the Spirit Commission of Bengal, 1884, pages 8 and 9).

The above facts are corroborated by the Excise Commissioner of Bengal in his memorandum of the 27th November 1893 prepared for the Hemp Drugs Commission. He says, "It will appear from paragraph 1, section 2 of Harrington's Analysis, volume 3rd, 1817, that with a view to check immoderate consumption, and at the same time to augment the public revenue, it was judged expedient to continue and extend the duties levied on liquors and drugs when the sayer collections were resumed from the landholders in the year 1790"

72. On the 16th February 1798, the Board of Revenue suggested that a duty be levied on the sale and consumption of (1) madak, (2) ganja, (3) subzi, (4) majoon, (5) banker, (6) charas.

On 2nd March 1798 the President (the Governor-General in Council) replied to the Board as follows :—"Some of the articles enumerated in your letter, we have reason to believe, are of so noxious a quality and produce a species of intoxication so extremely violent, that they cannot be used without imminent danger to the individual as well as to the public, who may be exposed to the effects of the temporary insanity frequently excited by the use of these drugs." "We are of opinion that the vend of any drugs of this description should be altogether prohibited, and we desire, therefore, that, after having made an enquiry with a view to ascertain more particularly the nature and effects of them you will prepare and submit to us a regulation for this purpose, as well as for establishing such duties as may appear to you proper on the sale of such other drugs as may be used without the same pernicious effects."

The Board of Revenue made enquiries under the above order and arrived at the conclusion that tobacco, opium, ganja, bhang or subzi, banker and toddy were "not for the most part represented as producing any very violent or dangerous effects of intoxication, except when taken to excess," and that "they appear to be useful either in medicine or otherwise." For these reasons they recommended on the 29th of May 1798 that the sale of none of them should be altogether prohibited, but stated what appeared to them the best means of restraining the use of them and improving the revenue by the imposition of such taxes as were best adapted to the nature of the case.

Accordingly unlicensed sale of intoxicating drugs was prohibited, and daily rates of duty on the sale of intoxicating drugs were levied by Regulation VI of 1800. From 1853 the daily tax was abolished and a duty at 1 rupee per sér on ganja and charas was imposed. In 1860 a fixed fee of Rs. 4 per maund was prescribed for each ganja license in addition to the above fixed duty.

73. In 1876 the present system of annually selling the retail license by auction was introduced.

74. In 1871 the Government of India thought it desirable to make an enquiry into the effects of the use or abuse of the hemp drugs, and on the 10th October 1871 all the Local Governments were requested to make the above enquiry. On the 17th December 1873 the Government of India, after receiving the replies from the Local Governments, resolved that, "with the exceptions of Burma and the Central Provinces, the Local Governments are not in favor of altering existing arrangements. His Excellency in Council, however, trusts that the various Local Governments and Administrations will endeavour, wherever it may be possible, to discourage the consumption of ganja and bhang by placing restrictions on their cultivation, preparation, and retail, and imposing on their use as high rate of duty as can be levied without inducing illicit practices."

As suggested by Sir Ashley Eden, the Chief Commissioner of Burma, the cultivation and consumption of ganja was absolutely prohibited in Burma from the beginning of 1873.

75. On the 29th April 1875 the Government of India addressed the Government of Bengal, and observed that "nothing should be done to place temptations in the way of the people that can possibly be avoided," and it was directed in paragraph 3 of the above letter "that His Honor the Lieutenant-Governor may rest assured of receiving the support of the Government of India in any measure that he may adopt for limiting the consumption of ganja, and indeed if the use of the drugs could be altogether suppressed without the fear of leading to its contraband use, such a course would be justified by its deleterious effects."

76. In August 1891, the Secretary of State, on a question put in the House of Commons, asked the Government of India to express their views on the effects of ganja and whether they proposed to take any further steps for restricting its consumption. The Government of India replied on the 9th August 1892 and stated in paragraph 3, " We are inclined to believe that ganja is the most noxious of all intoxicants now commonly used in India," and in paragraph 5 " that although we consider it impracticable to enforce the absolute prohibition of the use of ganja, we fully recognize it as our duty to restrict its consumption as far as practicable." They did not approve of the prohibition of ganja (1) because the consumers would be induced to use still more noxious drugs like dhatura, &c., (2) because the existence of hemp plants all over India made the prohibition of ganja impracticable.

77. It will be seen from the above facts that excise revenue was unknown in this country under the native system of government, and that the British Government originally took out of the hands of zemindars the excise administration with the main object of restricting the use of intoxicants, and that the highest authorities issued repeated orders to restrict or even prohibit their use, and to gain the above object rates of direct and indirect taxation have been immensely increased from time to time.

78. Having shown in paragraph 11-18 of the note that the present system of taxing the drugs does not check their use and the gradual rise in the fixed duty only leads people slowly but surely to accustom themselves to the higher burden and to smuggling and illicit gain of the vendors, who every year try to outbid their competitors at the annual auction for licenses, I cannot but recommend that Government should condemn their use by withdrawing its countenance and forbidding cultivation of hemp plant for ganja, manufacture of ganja, importation of charas across the frontiers, and the recognized sale of ganja and charas. In short my recommendations are the same as those made by the Indian Immigrants Commission of 1885-87 in their report, paragraph 8. " On recommending the prohibition of hemp, it may be found difficult to prevent in toto the use of hemp, we are convinced, however, that the knowledge that its use is forbidden by Law, will check to a very large extent the immoderate use of the plant by Indian immigrants' population of the colony."

79. In paragraph 553 of the Report, the question of suppressing all intoxicants has been dealt with, and the following expressions are made therein :—

(*a*) " No laws are of any service which are above the working level of public morality."

(*b*) " Scarcely any degree of utility short of absolute necessity will justify a prohibitory regulation, unless it can also be made to recommend itself to the general conscience, unless persons of ordinary good intentions either believe already or can be induced to believe that the thing prohibited is a thing which they ought not to wish to do."

(*c*) " In the exceptional cases in which the experiment has been attended with general success (as in some of the American States) the reformation of the habit has become an object of desire to the majority of the people, and the enactment for promoting such reformation has presented itself less as a restriction than as an auxiliary agency."

It has been proved (*vide* paragraphs 38 to 64 of this note) that the use of ganja and charas is physically, mentally, and socially very deleterious, and that their use is religiously prohibited and socially much in disrepute (*vide* paragraphs 19-29 of this note). When such is the case, I believe that the country is quite ripe for the introduction of prohibitory measures in respect to the injurious intoxicants. In paragraph 554 of the report this view is supported thus, "Now a certain number of persons deem it to be the duty of the British Government to suppress the trade in all intoxicants in all the countries under its sway, and there are, no doubt, special circumstances in India which render it less impossible than in some other countries to consider even so drastic a policy. These are notably the *general sobriety of its race*, and the *feeling, popular* as well as *religious*, which prevails *against their use* among a *large section of the community*."

80. In paragraph 562 of the Report some doubt has been expressed as to whether the article called hashish resembles the Indian products of the hemp plant. But the following authorities clearly show that in Arabic hashish is a synonymous term for the hemp drugs, especially bhang.

(1) Hashish is the Arabic name of hemp. It is bhang, not charas (see pages 4 and 9 of Hem Chandra Ker's report).

(2) Dr. Watts in his Economic Products of India states that "The Arabic hashish would seem to be given in allusion to the green intoxicating liquor" (see page 5); that bhang is generally known by the Arabic name hashish (see page 21); and that sabzi, hashish, bhang, and sidhi are synonyms of bhang, and all are applied to the drug as well as to the intoxicating drink prepared from it (see page 44).

81. *Precedents of other countries.*—In paragraph 557 of the Report an allusion is made to precedents for the prohibition of hemp drugs in other countries, and the statements are taken, I believe, from the journal of the Temperance Society, the Abkari for July 1893, which should be consulted in original.

The production, sale, and consumption of the hemp drugs are prohibited in the following countries :—

1. Lower Burma—By the order of the Government of India, dated 17th December 1873.

2. Upper Burma.—Under the above order.

3. Trinidad, a British colony (see Trinidad Commission's report, paragraph 9).

4. Mauritius, a British colony (see above report, paragraph 9).

5. Greece.—By Circular No. 22, dated Athens, March 27th, 1890, when the use of hashish in cafés and all other places was forbidden, and establishments in which it was found that hashish was supplied to persons frequenting them were closed.

6. Turkey.—Under note dated 1st March 1892, addressed by the Grand Vizir to the Ministry of Commerce.

7. Egypt.—By decree of March 29th, 1879, by order of Khedive.

8. Nabha State in the Punjab (see paragraph 735 of the Report).

82. The prohibition of ganja in Burma has proved successful and of immense benefit to the country, and no change in the present administration is needed or advocated, as will be seen from the following few quotations :—

(1) Letter from Mr. Bayne, Secretary to Chief Commissioner, dated 2nd November 1893, paragraph 5.—" No one in Burma desires any change in the excise law, so far as intoxicating drugs are concerned."

(2) From the Commissioner of Tenasserim Division to the Financial Commissioner, Burma, dated 30th January 1894.—" The effect of the prohibitory system has undoubtedly been to render it somewhat difficult and dangerous for any one to possess the drug, and this must have very largely tended to keep it out of the hands of Burmans. In my opinion if this system had not been adopted, the results would have been disastrous. Burmans would very certainly have taken to use ganja, for which they have no desire, and from their national character those who took to it would have used it to excess, as is the case with opium, which taken in moderation does no harm. Were the consumption and even possession of ganja not prohibited effect would be terrible."

(3) Memorandum by Mr. Culloden, Assistant Collector of Customs and Superintendent, Preventive Service, dated 1st December 1893.—" Ganja has always been considered a prohibited drug in Burma. The prohibition of its importation has so far been successful that the drug has been kept out of the local market to a considerable extent; this is proved by fact that, whenever traced to any one possessing it, only very small quantities of the *drug have been found* on them."

(4) Letter from the Deputy Commissioner, Akyab, dated 1st December 1893.—" The system of prohibition has on the whole been successful."

(5) Colonel C. B Cooke's answer, page 5.—" I think the prohibition should not be omitted."

(6) Letter from Deputy Commissioner, Tongoo, dated 12th January 1894, page 6, paragraph 2.—" In my opinion the system of prohibiting ganja in Burma has been to a very large extent, though not entirely, successful."

(7) Letter from the Commissioner, Arakan Division, dated 19th December 1893.—" I don't think there is any necessity for altering the system of prohibition in force in Burma."

(8) Letter from the Commissioner, Southern Division, dated 16th January 1894 —" As far as my experience goes, the system of prohibition of ganja has worked well. This is based on my experience in different places."

(9) Letter from Deputy Commissioner, Mergui, dated 24th January 1894.—" As far as the general public are concerned, the use of ganja is practically extinct."

(10) Witness No. 1, Colonel H. R. Spearman, Commissioner.—" The consumption of ganja would have been very much larger among the natives of India if there had been no prohibition." "Is, and should continue to be absolutely prohibited." " I am exceedingly

anxious to prevent as much as possible the Burmans from becoming consumers."

(11) Witness No. 12, Major G. S. Eyre, Deputy Commissioner.—"The existing prohibition is effective." "The total prohibition now in force is absolutely necessary. Were the use of the drug to be sanctioned, the spread of the habit would be great and the results lamentable."

(12) Witness No. 9, Mr. A. M. B. Irwin, Deputy Commissioner.—"I do not think the present prohibition causes any discontent, and that therefore it would be unwise to withdraw it without very strong reasons."

(13) Witness No. 2, Lieutenant-Colonel C. B. Cooke, Commissioner.—"... ......but still I think the prohibition should not be annulled." "Yes, I think it should be left unchanged." "Even if ganja could not be obtained from the plant as grown in Burma, I should still be averse from licensing its sale, because I consider that the licensing system raises up a class whose interest it is to spread consumption. I think that any licensing system would be far less effectual as regards the Burmese than the present prohibition."

(14) Witness No. 14, Mr. de la Courneuve, Deputy Commissioner.—"The absolute prohibition of the production and consumption of ganja in the Province in 1872-74 has had the best results and cannot be improved upon."

(15) Witness No. 3, Mr. J. G. Bridges, Commissioner.—"The Burmese generally approve of the prohibition of the drugs. As a people they disapprove the use of the drug." And that "I think the prohibition should be maintained."

(16) Witness No. 10, Mr. H. Adamson, Deputy Commissioner.—"It is certain that the use of these drugs among Burmans is quite insignificant, and I have no doubt that this fact is due in great measure to their use being prohibited by law."

(17) Witness No. 16, Mr. Fraser, Deputy Commissioner.—"The prohibition as regards Burmans should be maintained under penalties to both buyer and seller."

83. *Prohibition desirable.*—Now I turn to examine the evidence of witnesses who have expressed any opinion upon the question of *prohibition.* It was unfortunate that no question was specifically put to them to ascertain the desirability of prohibition, as mentioned in paragraph 568 of the Report, and thus most of them abstained from directly expressing their opinion on the point.

I do not agree in the conclusion arrived in paragraph 569 of the Report, that the majority of witnesses are against prohibition; but, on the contrary, hold that an overwhelming evidence is for *prohibition*, and my reasons are as follow:—

(1) Because they have been shown to be most deleterious, physically and mentally (*vide* paragraphs 38-59 of this note).

(2) Because the consumption of these articles produces bad effects upon the society (*vide* paragraphs 60-64 of this note).

(3) Because they are much in disrepute (*vide* paragraphs 19-29).

(4) Because ganja was prohibited in *Burma* in 1873, and the experience of the last 20 years has shown that the prohibition has been of immense good to that country, so much so that the Government officers of that province do not advocate any change.

(5) Because it was always prohibited by the Hindu and Mahomedan governments preceding the English Government.

(6) Because the Government of India has repeatedly acknowledged the desirability of the *prohibition* (*vide* paragraphs 72-76).

84. *Prohibition feasible.*—The prohibition of ganja and charas is feasible on the following grounds:—

(1) Charas is imported into India from *Yarkand* and other foreign countries, and can be stopped without difficulty, as stated in paragraph 567 of the Report.

(2) In paragraph 6 of this note it is shown that ganja cannot be produced from the wild and uncultivated hemp plants. It is an admitted fact that the cultivation of ganja is already confined to limited areas in certain provinces, and that its cultivation and manufacture requires particular knowledge, skill, and care. Therefore the existence of the wild hemp plants, wherever they are found in India, would not at all affect the practical difficulty of checking and stopping the consumption of ganja. Paragraph 664 of the Report would throw some light on this point.

(3) In paragraphs 19-37 of this note it has been shown that their use is not connected with any social and religious customs and that their use is held in much disrepute. Therefore their *prohibition* will not be taken as an interference with old customs or resented to by the people. On the contrary, the people will be grateful to Government for prohibition.

85. *Political danger.*—The consumption of ganja and charas is confined to beggars and low class people, whose number does not exceed to one man in about every 500 of the population. Therefore there is no chance of a public discontent or political danger. The following statement shows that a very large majority of witnesses hold the above opinion:—

Province.	Political danger.			No political danger.			Remarks.
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.	
Bengal	13	12	25	54	57	111	
Assam	...	...	...	8	12	20	
North-Western Provinces ...	7	5	12	27	69	96	
Punjab	4	5	9	18	14	32	
Central Provinces ...	9	9	18	12	14	26	
Carried over ...	33	31	64	119	166	285	

Province.	Political danger.			No political danger.			Remarks.
	Officials.	Non-officials.	Total.	Officials.	Non-officials.	Total.	
Brought forward ...	33	31	64	119	166	285	Witnesses silent on this point have not been taken into account.
Madras	6	1	7	39	25	64	
Bombay	6	4	10	30	12	42	
Sind	3	2	5	5	7	12	
Berars	...	...	...	7	5	12	
Ajmere	...	...	...	1	...	1	
Coorg	...	...	...	...	2	2	
Beluchistan	...	...	...	...	...	...	
TOTAL ...	48	38	86	201	217	418	

86. I have given a list in statement V of some witnesses of position and experience who state that there would be no political danger if the use of these drugs is prohibited, and quote here Mirzà Irfan Ali Beg, Deputy Collector, Gonda, witness No. 47, N.-W. P., who says, "the drugs can be prohibited by disallowing the exports and imports and sales of the drugs. I do not think it will cause any serious discontent among the consumers, who are for the most part the Hindu Fakirs and the Brahmans. It was experienced in this district last year, when there was no sale of these drugs for about 5 months. The people felt an inconvenience, as far as it related to their habit, and nothing else. There will be no political danger and they being Brahmans and fakirs, would not take alcoholic stimulants. They will be content with tobacco."

87. *Danger of using more deleterious drugs.*—There is no fear that the people will be driven to more deleterious drugs, such as dhatura. The evidence has established that the consumers of ganja and charas very seldom use dhatura at present. Therefore there is no danger of that kind. The number of witnesses who allude to the possibility of the use of dhatura is quite insignificant. In the report only 31 out of 1,194 witnesses have been mentioned. Some of these 31, too, will on examination be found not to hold this opinion, *viz.*, that dhatura will take the place of ganja. For example :—

(1) Bombay witness 1, the Honourable Mr. Mackenzie, Commissioner of Excise, says:—"I do not think the labouring classes who use the drugs would take to dhatura. They would rather take to alcohol. I think this would probably do less harm . . . . . than the hemp drugs."

(2) Bombay witness 109, Secretary, Arya Samaj, who refers simply to alcohol.

(3) Bengal witness 164, Raja Surja Kanta Acharjya Bahadur, who refers simply to alcohol.

(4) Bengal witness 167, Rai Bahadur Radha Ballav Chowdhry, who refers simply to alcohol.

(5) North-Western Provinces witness 51, Thakur Tukman Singh, who says that "dhatura could not be substituted for ganja."

(6) Punjab witness 76, The Honourable P. Chander Chatterjee, who refers to alcohol only.

(7) Madras witness 23, Mr. Campbell, Collector, who refers to alcohol only.

On some of the conclusion arrived at by the Commission.

88. *Policy of control and restriction.*—In paragraph 552 of the Report it has been stated that "in regard to the physical effects the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all;" that "in respect to the alleged mental effects of the drugs, the Commission have come to the conclusion that the moderate use of the hemp drugs produces no injurious effect on the mind;" that "in regard to the moral effects of the drugs, the Commission are of opinion that their moderate use produces no moral injury whatever;" and that "the moderate use of these drugs is the rule and that the excessive use is comparatively exceptional . . . . The excessive may certainly be accepted as very injurious, but it must be admitted that in many excessive consumers the injury is not clearly marked. The injury done by the excessive use is, however, confined almost exclusively to the consumer himself; the effect on society is rarely appreciable." If these views are accepted, there would be no reason which ought to lead to a recommendation for the policy of control and restriction of these drugs by means of taxation. All along it has been declared by our benign Government that the injurious intoxicants are taxed for the sake of restricting their consumption and not for the sake of revenue. When the injurious character of these drugs has not been established to the satisfaction of the Commission, I think they were not justified in advocating this policy of restriction; for in the light of the above remarks made by the Commission these drugs should stand on the same level with tea, tobacco, and other similar stimulating articles; and so long as the latter are not taxed there would hardly be any ground to tax ganja and charas, which have the further recommendation to be left free as their consumption is confined mostly to the poor classes and beggars.

89. *Method of taxation.*—The combination of a direct duty with the auction of privilege of vend has been recommended. This seems to be against the general principle of taxation, for it cannot be denied that by the system of license of vend an indirect duty is raised, and thus the drugs will be taxed twice. For the sake of restriction perhaps it would have been enough to tax them once high enough.

Judging from the past precedents, I have not the least hesitation in asserting that the recommendations of the Commission will not have any effect in restricting the use of hemp drugs.

Under the present system of Bengal a class of wholesale vendors has been created whose interest lies in stimulating the supply of ganja and another class of retail vendors whose interest lies in publishing and stimulating the demand. There is a 3rd class created, who are called brokers. All these are agents for the spread of consumption. The restriction of use is clearly against their personal interests.

90. *Introduction of Bengal system into other provinces.*—It is an admitted fact that the consumption of ganja in Bengal is more extensive than in any other province and that its evil effects are also more potent there. Under these circumstances it is difficult to understand the ground on which the introduction of that system is recommended for other provinces where the consumption is still very low and no attempt has yet been made to grow the drug of a superior class.

91. *Abolition of the fixed price and grant of wholesale licenses more freely and without charge in the Central Provinces.*—The recommendation of the Commission to abolish the fixed rate at which the wholesale vendors in the Central Provinces are at present bound to sell ganja to the retail vendors will, I believe, result in increasing the profits of the wholesale vendor. The increased profits and grant of licenses more freely and without charge, will create a number of wholesale vendors, who will not fail to improve and do everything in their power to stimulate the production and increase the consumption.

The present system of having a fixed price limits the profits of the wholesale vendor, and the result has been that their number is not so large nor the consumption as great as in Bengal, where the price is left in the hands of the vendor.

92. *Gradual taxation of charas.*—When in Bengal the rate of direct duty is Rs. 9 per seer on chur ganja, it is not understood why the Commission recommended so low a rate as Rs. 2 a seer for charas in the Punjab, the charas being evidently admitted to be much stronger than ganja. Although in paragraph 674, I must admit, it is noted that this amount has been recommended as one that should be imposed "to begin with" and ultimately the taxation is to be "raised considerably" regard being had to prevent "the trade being seriously affected." The policy here seems evidently to be one to take as much as the people can pay and not the full amount which might lead to injure the trade and stop consumption.

93. *Opening of new shops.*—New shops are recommended to be opened after a consultation with municipal members, etc., about the necessity for opening them. It is not stated who should be the proposer for these shops. I think the opening of new shops will only afford a greater facility for consumption and will enable these obnoxious drugs to reach their new converts. It would perhaps have been more in keeping with the principles of the Commission if the new shops at least had been stopped. But if new shops must be opened the only alternative that I have to suggest is to propose the condition that the application should be made by the inhabitants of the place.

94. *Sale of ganja in Burma.*—Among other proposals the Commission have recommended sale of ganja in Burma for the benefit of the natives of India. The only good which this proposal will do, if carried out, will be to render *null* the protection which the prohibition of its sale in that country at present affords to the Burmese. For I have not the least doubt that the contagion of its use will soon spread to the Burmans from the Indians, and that the natives of that country will soon learn the luxury of consuming this drug by procuring it through their Indian friends; and ultimately when they have sunk deep in the vice, grounds will be made out to extend the sale of these drugs openly to the Burmans. I must not omit that all the Burma officials without hardly a single exception, have stated that there is no need to change

the present system of prohibition, and some of them have gone so far as to say that if the consumption and even possession of ganja were not prohibited, effect would have been terrible, for the Burmans from their national character would have used it to excess. For further information on the subject I beg to refer to para. 82 of my note, in which the evidence of some of the important officers is quoted *in extenso*.

Recommendation. 95. In conclusion I beg to subjoin my final recommendations, which are the same as those that I submitted on the 6th August at the last sitting of the Commission.

I.—Charas is very deleterious and the use of this form of the drug is highly in disrepute. It has no connection whatever with religious and social customs of the people, and as it is imported from foreign countries it is quite feasible to prohibit its importation. I would therefore recommend the prohibition of its manufacture, importation, and sale. With a view to save the persons connected with the manufacture and trade of charas from suffering any pecuniary loss and the habitual consumers of charas from the inconvenience of sudden deprivation of the use of the drug, it would be advisable to give sufficient notice and allow a time before the adoption of prohibitory measures.

II.—Ganja is similarly deleterious in its effects. It is as disreputable as charas and has no connection with social and religious customs. Its consumption is confined chiefly to bad characters, low class people, and beggars. I am of opinion that the prohibition of its production and sale is desirable and feasible; that the present excise administration has, generally speaking, failed in restricting its use, and that prohibition of ganja in Burma has proved of immense benefit to the people of that country. I would therefore recommend that measures should be adopted keeping ultimate prohibition in view, and that as a preliminary step towards prohibition the system of registering the consumers of ganja and charas should be adopted for a reasonable time like that which has been adopted in Burma since 1892 for the opium consumers.

III.—Bhang is the least injurious of all the intoxicants commonly used in this country. It is to a certain extent connected with the social and religious customs of the people. The bhang plant could be found in certain parts of the country growing wild, and in my opinion it would not be a very easy task to bring the production and sale of bhang under full control of the Excise Department without much annoyance to the people. For these and other reasons, I would recommend that bhang may be left alone for the present.

NIHAL CHAND,

13th September 1894. *Member, Hemp Drugs Commission.*

STATEMENT I.—*Social and religious customs. (Para. 37 of the note.)*

Bengal.

1.—Ganendra Nath Pal, Sub-Divisional Officer.—*Number of witness*—46.

Q. 32.—"The consumption of ganja is not required by any social or religious custom. Bhang is a social custom, drunk as sherbet on the fourth day of the Durga Puja."

2.—Durgaguty Banerji, Collector of Calcutta.—*Number of witness*—13.*

Q. 32.—"As regards consumption of ganja and charas I am not aware of any customs, social or religious, in which it is prescribed, but sidhi is largely, though in moderate doses consumed by all classes of Hindus on the 4th day of the Durga Puja."

3.—Mahesa Chandra Nyayaratna, Principal, Government College of Sanskrit, Calcutta.—*Number of witness*—93.

Q. 35.—"Ganja smokers are held in disrepute."

4.—Prokash Chunder Roy, Excise Deputy Collector, Patna.—*Number of witness*—58.

"In these provinces no customs, social or religious, are known in which ganja is essential."

5.—Akshay Kumar Maitra, Secretary, Rajshahye Association.—*Number of witness*—233.

Q. 32.—"I know of no social or religious custom in regard to the consumption of ganja, and I believe there is none."

6.—Gobind Chundra Das, Excise Deputy Collector.—*Number of witness*—64.

Q. 33.—"The use of these drugs is always in disrepute. No respectable person would associate with one who indulges in ganja, bhang, or charas.

Q. 51.—"It can, however, be asserted that ganja smokers are as a rule regarded as of a disrespectable character, and as being persons to be avoided by all respectable gentlemen."

7.—Sri Sri Maharaj Raghunath Saran Singh Deo, Zamindar.—*Number of witness*—153.

Q. 32.—"It is not required to be used in festivals."*

8.—Brahmo Deo Narayan Misr.—*Number of witness*—157.

Q. 32.—"There is no social or religious custom which enjoins the consumption of any of these drugs. Rather every sect of Hindu religion prohibits the use of any of these intoxicating drugs. Certainly there are persons who in the name of religion, for their personal gratification, use these drugs and persuade others to do the same, especially among ignorant class of people. Such people are generally to be found among the fakirs or sadhus, who are in reality knaves, attach much religious importance to themselves and never shrink from any sort of mischief."

9.—Hem Chunder Kerr, Sub-Registrar and Pensioned Deputy Collector and Author of the Notes on Ganja.—*Number of witness*—80.

Q. 33.—"The consumption is generally regarded with disfavour. The practice is looked upon by the society as low and disreputable. The sentiment is attributable to the injurious effects of the drugs by their abuse. I do not know of any such custom."

10.—Representative, Indian Relief Society, Calcutta.—*Number of witness*—238.

Q. 33.—"But to discuss the subjects on its merits the issues should be clearly understood. It must first of all be noticed that charas and majum and ganja as now used are never sanctioned by religious custom or usage. As for ganja, we append here (*vide* Appendix II) the Vyavasthas (opinions) of eminent pandits, which condemn its use and declare that, except some reference to it in the tantras, which are considered modern interpolations, there is no mention of it made in any other Shastras. The theory of religious sanctions for the use of ganja gets a rude shock when we examine the way in which people of this country take to it. In fact it is not enjoined in one or the other Shastras, but is used because it serves as a cheap and powerful intoxicant."

* NOTE.—These witnesses are not reported.

Assam.

11.—Laksmikanta Barkagati, Secretary, Tezpur Ryots' Association.—*Number of witness* 46.

Q. 33.—"The consumption of ganja is looked upon with hatred. Ganja smokers are generally treated with contempt; they are believed to be untrustworthy. Ganja smokers are not true to their words; they are a source of annoyance to the neighbours; they do not mind to their works; these are the reasons why they are generally hated."

12.—Radha Nath Changkakoti, Dibrugarh.—*Number of witness*—47.

Q. 33.—In Assam the use of not only hemp, but of all intoxicating drugs is religiously prohibited. In the Shastras or the convents of the principal Gussains or spiritual guides in Assam the rule against the use of any intoxicating thing is strictly enforced."

Q. 20.—"As a rule ganja is smoked by the lower class of people and especially by the lowest of ascetics."

North-Western Provinces.

13.—The Hon'ble the Raja of Bhinga, C.S.I.—*Number of witness*—180.

Q. 32.—"There is no social or religious custom in this part of the country. The lower classes of people, however, sometimes make use of bhang when they cannot procure grog for such occasions as social gatherings. Manu distinctly lays down that the use of all intoxicating drugs is unlawful."

14.—Munshi Ujagur Mal, retired Deputy Collector.—*Number of witness*—55.

Q. 32.—"There is no custom in any caste or religion enjoining consumption of any of these drugs."

Q. 33.—"Consumption of bhang is not looked upon with favour, but there is no general public opinion against it, but consumption of charas is looked upon as a vice, as it is used by men of low caste more especially. There is no custom of worshiping the hemp plant."

15.—Thakur Tukman Singh, Zemindar.—*Number of witness*—51.

Q. 32.—"The use of these drugs is strictly forbidden in the Vedas and Shastras, the religious books of the Hindus. The use of it is similarly prohibited amongst the Muhammadans."

"The ignorant persons take up this habit for want of religious doctrines. During the holi festivals people of high caste use majum (which is prepared from bhang), while the lower caste persons drink liquor."

"It is not a part of the religious custom, and is not essential."

16.—Chaudhri Ghasi Ram, landowner, Maulaheri.—*Number of witness*—187.

Q. 35.—"The feeling of the people is strongly against drugs."

17.—Rai Bahadur Munshi Sheo Narain, Secretary, Municipal Board, Agra.—*Number of witness*—226.

Q. 33.—"The use of these drugs is generally considered to be disreputable, with the exception of bhang. The use of charas and ganja is against religious principles. The use is considered to be disreputable, as these drugs are generally used by the lower classes."

18.—Mahant Kesho Ram Rai, Preacher.—*Number of witness*—242.

Q. 32.—"No social or religious custom."

Q. 33.—"The consumers of these drugs are hated and despised by society on account of the consequences of the drugs."

Q. 32. Oral.—"There is no religious injunction to take the drugs."

19.—M. Hashmat Ullah, Joint Magistrate.—*Number of witness*—30.

"No custom, social or religious, may be mentioned in regard to the consumption of any of the drugs. Use of the drug is in no way essential with regard to any custom."

20.—Pundit Sri Lal, Officiating Joint Magistrate,—*Number of witness*—33.

"There is no custom, social or religious, in regard to the consumption of ganja and charas."

21.—Raja Lachman Singh, retired Deputy Collector.—*Number of witness*—182.

"Except bhang the use of the other drugs is generally regarded as disreputable."

Central Provinces.

22.—Chandi Prashad, Malguzar and President.—*Number of witness*—61.

"There is no social or religious obligation to take these drugs even amongst Bairagis and Gusains. Bhang is sometimes spoken of as 'Mahadeo's leaves,' but there is nothing in the Shastras to that effect."

23.—Rao Venkat Rao, Malguzar and Political Pensioner.—*Number of witness.*—63.

Q. 32.—"In this province there is no custom, either religious or social, regarding the consumption of ganja or bhang."

Q. 33.—"The public opinion is against the use of these drugs. The use of these drugs is held in disrepute because it is injurious to health."

24.—The Hon'ble Gangadharrao Madhav Chitnavis, Honorary Magistrate, and Member, Viceregal Council.—*Number of witness*—46.

Q. 32.—"It is not used here in these provinces for religious purposes."

Q. 33.—"The consumption of each of these drugs is looked down upon by the people. It is considered immoral in the social scale. Generally all sorts of vices are looked down upon by the better classes of society, and as this is a narcotic that is generally used by the lower classes of people, and as its consumption is necessarily very generally associated with bad characters, and also as the smoking of this drug has a tendency to make its victims demoralized and much of their mental vigour, the habit is looked down upon by the people. No classes or persons here worship the hemp plant."

25.—Raja Sudhal Deb.—*Number of witness*—47.*

Q. 32.—"No religious or social ceremonial enjoins the essential use of ganja as far as I know."

Q. 33.—"The public regard the smoking of ganja with unmixed contempt."

26.—Trimbak Rao Sathe.—*Number of witness*—13.

Q. 33.—"People consider the ganja smoker as an unwelcome associate. Such men are generally debauchees or of disreputable character."

27.—Syed Muhammad Husain, Diwan.—*Number of witness*—15.

Q. 32.—"To the best of my knowledge there is no custom, religious or social, in regard to any of these drugs."

Q. 33.—"The consumption of ganja is regarded very badly. The public opinion about this is that it is the most derogatory kind of intoxication and its smoker is looked upon as a mean person. Its use is forbidden by the Muhammadan religion, and Brahmans also abstain from it."

28.—Pandit Narain Rao Gobind, Zamindar.—*Number of witness*—60.

Q. 32.—"None of these drugs bears any connection with religion, caste, or custom; they are only taken for intoxication."

Bombay.

29.—Rao Saheb Shesho Krishna Madkavi.—*Number of witness*—41.

Q. 32.—"There is no custom at all, social or religious, in regard to the consumption of any intoxicating drugs, like bhang, ganja, &c. On the contrary, their use is forbidden by religion. A consumer of such drugs has no religious or social binding to use the drug."

Q. 33.—"The public opinion (social and religious) is against the use of the drug."

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* NOTE.—These witnesses are not reported.

30.—Balkrishna Narain Vaidya, B.A.—*Number of witness*—46.

Q. 32.—"There is no custom, religious or social, in regard to the consumption of ganja."

Q. 33.—"Society looks upon ganja with contempt, as it produces evil effects on the body and mind in old age and decline of health."

31.—Dr. Ganesh Krishna Garde, L.M.S.—*Number of witness*—91.

Q. 33.—" Smoking of ganja or charas is generally regarded by higher and middle classes as disreputable, this sentiment being deleterious effects of the drug on mind and body."

32.—Surgeon-Major K. R. Kirtikar, L.M.S.—*Number of witness*—73.

Q. 32.—" No shastrical text, so far as I have been able to ascertain with the aid of my Sanskrit Pandit, exists rendering the use of either of these drugs essential."

33.—Rao Bahadur Rango Ram Chandra.—*Number of witness*—31.

Q. 32.—" No custom, social or religious, in regard to the consumption of any of the gs exists in the Southern Maharatta country."

Q. 33.—" The consumption of any of these drugs is generally regarded as a vice."

34.—Ardesir Dadabhoy Mody, L. M. and S. P. J.,—*Number of witness*—97.

" There is no social or religious custom among the Parsees in which bhang is consumed."

Madras.

35.—M. R. R. Diwan Bahadur S. Venkata Ramáder.—*Number of witness*—35.

Q. 32.—"There is no custom, social or religious, in regard to ganjayi."

36.—Samdasu Bavaji, priest.—*Number of witness*—191.

Q. 32.—"The use of ganja is not considered as essential to social or religious customs as some say."

37.—Teachers' Association.—*Number of witness*—174.

Q. 33.—" The consumption is treated with contempt. Religion and society do not sanction it."

38.—Viswanadhan Guravaiah Sastri.—*Number of witness*—166.

Q. 33.—" The use of ganja and bhang is regarded as a bad habit. In societies men of these habits are not tolerated."

39.—The Hon'ble A. Sabapathy Moodelliar, Rai Bahadur, merchant.—*Number of witness*—175.

Q. 32.—" The use of ganja by the Brahmans of this presidency is prohibited by religion. The other respectable castes follow suit in holding the same view."

Q. 33.—" Ganja smokers in this province are looked upon as people whose words cannot be relied on ; the use of any form of the narcotic is generally in disrepute, because intoxication blinds the reason of man, his brain is muddled, and under its influence the man evolves endless fancy, mental pictures, and indulges in them to the detriment of his duty in the world as man."

40.—E. Subramana Iyer, Chairman.—*Number of witness*—143.

Q. 32.—"The use is not encouraged by any social or religious custom. It is not considered to be essential in any way ; but on the other hand it is deprecated by the society in general and forbidden by religion."

STATEMENT II.—*List of Medical Witnesses who pronounce the moderate use of ganja and charas to be deleterious in answer to questions Nos. 42, 45, and 49. (Paragraph 44 of the note.)*

Serial No.	Province.	No. of witness.	Name and rank.
			Superiors.
1	Bengal ...	45	Surgeon-Major McDonald, Civil Surgeon.*
2	Do. ...	119	B K. Sen, in Civil Medical charge.
3	Do. ...	107	Surgeon-Lieutenant-Colonel R. L. Dutt, Civil Surgeon.
4	Do. ...	108	Surgeon-Lieutenant-Colonel G. Price, Civil Surgeon.
5	Do. ...	103	Surgeon-Lieutenant-Colonel J. F. P. McConnell, Civil Surgeon.
6	Do. ...	118	Upendra Nath Sen, Officiating Civil Medical Officer.
7	Do. ...	102	Surgeon-Lieutenant-Colonel W. Flood Murray, Civil Surgeon.
8	Do. ...	109	Surgeon-Lieutenant-Colonel E. Bovill, Officiating Civil Surgeon.
			Subordinates.
9	Do. ...	123	Devendra Nath Ray, Teacher of Medical Jurisprudence.
10	Do. ...	128	Hari Mohan Sen, Assistant Surgeon.
11	Do. ...	127	Behari Lal Pal, Assistant Surgeon.
12	Do. ...	150	D. N. Chuckerbutty, Assistant Surgeon.
13	Do. ...	130	Meer Kumar Ali, Civil Hospital Assistant.
			Private Practitioners.
14	Do. ...	151	Bijoy Ratna Sen, Kaviraj.
15	Do. ...	152	Ganga Prosad Sen Kaviratna, Kaviraj.
16	Do. ...	133	Revd. D. Morison, Medical Missionary.
17	Do. ...	134	Pyary Sanker Das Gupta, Medical Practitioner, Secretary, Bogra Medical Society.
18	Do. ...	136	Mohim Chunder Ray, Medical Practitioner.
19	Do. ...	154	Peari Mohun, Kaviraj, Native Physician.
20	Do. ...	137	Kedareshwar Acharjya, Medical Practitioner.
21	Do. ...	146	Ram Chunder Gupta, Kaviraj.
22	Do. ...	139	Dr. Mahomed Sadrul Haq, Medical Practitioner.
23	Do. ...	140	Trailokya Nath Mazumdar, Medical Practitioner.
24	Do. ...	141	Prosad Das Mullick, Medical Practitioner.
25	Do. ...	142	Nimay Churan Das, Medical Practitioner.
26	Do. ...	157	Brahmo Deonarayan Misser Vaid, Native Medical Practitioner.
27	Do. ...	158	Madhava K. Das, Private Practitioner.
28	Do. ...	143	Tara Nath Bal, Medical Practitioner.
29	Do. ...	144	Nakur Chandra Banerji, Medical Practitioner.
30	Do. ...	145	Luchmi Narayan Naik, Medical Practitioner.
* 31	Do. ...	237	
32	Do. ...	148	Annada Prosanno Ghatak, Medical Practitioner.
			Superiors.
1	Assam ...	20	Surgeon-Major J. W. Macnamara, Civil Surgeon.
2	Do. ...	23	Dr. H. A. Macleod, Civil Medical Officer.
3	Do. ...	24	James McNaught, Civil Medical Officer.
			Subordinates.
4	Do. ...	25	Atul Chunder Ray, Assistant Surgeon.
5	Do. ...	27	Azher Hossein, Civil Hospital Assistant.
6	Do. ...	26	Baikanta Kumar Nandi, Assistant Surgeon.
7	Do. ...	24	Lachman Pershad, Civil Hospital Assistant.
			Private Practitioner.
8	Do. ...	31	Krishna Chandra Sanyal, Medical Practitioner.
			Superiors.
1	N.-W. P.	87	Surgeon-Major J. F. Tuohy, Civil Surgeon.
2	Do. ...	88	Surgeon-Major W. Deane, Civil Surgeon.
3	Do. ...	79	Surgeon-Lieutenant-Colonel M. D. Moriarty, Civil Surgeon.

* These witnesses are not reported.

Serial No.	Province.	No. of witness.	Name and Rank.
			Superiors—contd.
	N-W.P....	93	J. C. Ellis, retired Civil Surgeon.
	Do. ...	84	Surgeon-Captain R. R. Weir, Superintendent, Central Prison.
	Do. ...	82	Surgeon-Major E. Mair, Superintendent, Central Prison.
	Do. ...	77	Surgeon-Lieutenant-Colonel R. A. K. Holmes, Superintendent, Central Prison.
			Subordinates.
8	Do.	105	Buldeo Singh, Government Service, Medical Department.
9	Do.	96	Nobin Chundra Chakravarti, Assistant Surgeon.
10	Do.	98	Subhan Ali, Assistant Surgeon.
11	Do.	113	Jamal Khan, Hospital Assistant.
12	Do.	104	Hori Lal, Assistant Surgeon.
13	Do.	118	Mohammad Husain, retired Hospital Assistant.
14	Do.	119	Waris Ali, Hospital Assistant.
15	Do.	115	Mohammad Baksh, Hospital Assistant.
16	Do.	99	Poorna Chandra Banerji, Assistant Surgeon.
17	Do.	100	Ganga Singh, Assistant Surgeon.
18	Do.	97	Mul Raj, Assistant Surgeon.
19	Do.	116	Bhagelu Ram, Hospital Assistant.
20	Do.	117	Rahimullah, Hospital Assistant.
21	Do.	111	Prasana Kumar Banerji, Assistant Surgeon.
22	Do.	106	Mohammad Abdur Rahim, Khan Bahadur, Assistant Surgeon.
23	Do.	95	Troylucko Nath Ghose, Assistant Surgeon.
24	Do.	109	Pandit Hari Dutt Pant, Assistant Surgeon.
			Private Practitioners.
25	Do.	120	S. P. Roy, Municipal Analyst.
26	Do.	125	Ram Narain, Tebabut.
27	Do.	121	Mohammad Yar Khan, Pensioner and Health Officer.
28	Do.	126	Gokal Chand, Private Medical Practitioner.
29	Do.	127	Isan Chandra Ray, Medical Practitioner.
30	Do.	161	Abdul Samad, Hakim.
31	Do.	162	Mohammad Ibrahim Khan, Hakim.
32	Do.	163	Jugal Kishore, Vaid and Hakim.
33	Do.	164	Abdul Razak, Hakim, Municipal Board.
34	Do.	165	Salig Ram, Hakim.
35	Do.	166	Sayad Masoom Ali, Hakim.
36	Do.	167	Sayad Aulad Hossain, Hakim.
37	Do.	128	Pandit Kanhya Lal, Medical Practitioner.
38	Do.	129	Abu Ali Mohammad Jafar, Medical Practitioner.
39	Do.	130	Monahar Pershad Tewari, Practitioner in Medicine and Surgery.
40	Do.	131	Mazhar Subhan, Medical Practitioner.
41	Do.	132	Pandit Ram Narayan, Private Practitioner.
42	Do.	133	Pandit Gunga Din, Private Practitioner.
43	Do. ..	134	Mohammad Yasin, Medical Practitioner.
44	Do. ..	135	Syed Abu Ibrahim, Private Practitioner.
45	Do. ..	168	Gosayen Gopi Lal, Native Doctor.
46	Do. ..	169	Lachman Dass, Hakim.
47	Do. ..	136	Lachman, Medical Practitioner.
48	Do. ...	137	Amjad Hussain Khan, Medical Practitioner.
49	Do. ..	138	Musharraf Ali Khan, Medical Practitioner.
50	Do. ...	244	Piyari Lal, Petition-writer and Doctor.
51	Do. ...	139	Naim Ullah, Medical Practitioner.
52	Do. ...	140	Bal Mukand, Medical Practitioner.
53	Do. ...	141	Ram Narain, Apothecary.
54	Do. ...	142	Lala Bhairob Baksh, Mafidar and Physician.
55	Do. ...	171	Janki Dass, Baid.
56	Do. ...	172	Sakhawat Ali, Yunani Physician.
57	Do. ...	143	Ram Chandra, Medical Practitioner.
58	Do. ...	144	Mokurrab Hussain, Physician.

Serial. No.	Province.	No. of witness.	Name and Rank.
			Private Practitioners—contd.
59	N.-W. P.	145	Upendra Nath Ganguly, Medical Practitioner.
60	Do. ...	146	Mohammad Nazir Husein, Physician.
61	Do. ...	147	Buldeo Sahai, Medical Practitioner.
62	Do. ...	173	Mohammad Sadiq, Hakim.
63	Do. ...	148	Nobin Chunder Mitter, Medical Practitioner.
64	Do. ...	149	Ramji Mull, Medical Practitioner.
65	Do. ...	150	Kalli Baidji, Medical Practitioner.
66	Do. ...	151	Chandi Din, Medical Practitioner.
67	Do. ...	152	Gur Dutt, Medical Practitioner.
68	Do. ...	153	Amba Prasad, Private Practitioner.
69	Do. ...	174	Asghar Hosain, Native Physician.
70	Do. ...	175	Mohammad Ali, Yunani Doctor.
71	Do. ...	154	Nizam-ud-din Ahmed, Medical Practitioner.
72	Do. ...	155	Pandit Ram Dat, Physician.
73	Do. ...	156	Jogendra Nath Mullick, Medical Practitioner.
74	Do. ...	157	Brij Lal, Medical Practitioner.
75	Do. ...	158	Gopal Sahai, Medical Practitioner.
76	Do. ...	176	Mohammad Sarfraz Ali, Yunani Hakim.
77	Do. ...	159	Ganga Pershad, Medical Practitioner.
78	Do. ...	177	Jagannath Misr, Native Physician.
			Superiors.
1	Punjab ...	35	Surgeon-Major J. A. Cunningham, Civil Surgeon.
2	Do. ...	37	Rahim Khan, Khan Bahadur, Honorary Surgeon-Superintendent, Medical School.
3	Do. ...	34	Surgeon-Major G. W. P. Dennys, Civil Surgeon and Superintendent, Lunatic Asylum.
4	Do. ...	32	Surgeon-Major T. E. L. Bate, Inspector-General of Prisons.
5	Do. ...	46	Dr. H. M. Clark, Medical Missionary.
			Subordinates.
6	Do. ...	39	Thakur Das, Rai Bahadur, Assistant Surgeon.
7	Do. ...	40	Rai Bahadur Mehr Chand, Assistant Surgeon.
8	Do. ...	42	Jassa Ram, Hospital Assistant.
9	Do. ...	43	Jhande Khan, Hospital Assistant.
10	Do. ...	41	Ram Narain, Assistant Surgeon.
11	Do. ...	38	Sahib Ditta, Assistant Surgeon.
12	Do. ...	44	Karam Elahi, Hospital Assistant, Lunatic Asylum.
13	Do. ...	45	Gopal Das, Hospital Assistant, Lunatic Asylum.
			Private Practitioners.
14	Do. ...	48	Hem Chandra Sen, Medical Practitioner.
15	Do. ...	49	Mathra Das, Medical Practitioner.
16	Do. ...	50	Pandit Mahadev, Medical Practitioner.
17	Do. ...	52	Narain Das, Medical Practitioner.
18	Do. ...	53	Pandit Jinar Dhan, Medical Practitioner.
19	Do. ...	51	Hakim Salimullah, Native Physician.
20	Do. ...	55	Shah Nawaz, Medical Practitioner.
			Superiors.
1	C. P. ...	38	Honorary Surgeon-Major J. E. Harrison, Civil Surgeon.
2	Do. ...	39	J. Prentie.
			Subordinates.
3	Do. ...	43	Mir Zamin Ali, pensioned Hospital Assistant.
4	Do. ...	42	Muhammad Habibullah, Hospital Assistant.
5	Do. ...	41	Doorga Das Sen, Assistant Surgeon.
			Private Practitioner.
6	Do. ...	68	Rev. O. Lohr, Missionary.

Serial No.	Province.	No. of witness.	Name and Rank.
			Superiors.
1	Madras ...	85	Surgeon-Major W. G. King, Acting Sanitary Commissioner.
2	Do. ...	99	Surgeon-Major A. J. Sturmer, District Surgeon.
3	Do. ...	96	Surgeon-Major W. F. Thomas, District Surgeon.
4	Do. ...	95	Surgeon-Major S. C. Sarkies, District Surgeon.
5	Do. ...	98	Surgeon-Major R. Pemberton, Civil Surgeon.
6	Do. ...	88	Surgeon-Major N. Chatterji, Medical Officer in charge 18th Madras Infantry.
7	Do. ...	105	Dr. A. Wells, Medical Officer.
8	Do. ...	97	Surgeon-Captain C. F. Fearnside, District Surgeon.
9	Do. ...	89	Surgeon-Major H. A. F. Nailer, Acting District Surgeon.
			Subordinates.
10	Do. ...	104	Mohammad Asadulla, Civil Apothecary.
11	Do. ...	110	Ramanugulu Naidugaru, Hospital Assistant.
12	Do. ...	111	Chinny Sreenivasaru, Hospital Assistant.
13	Do. ...	125	Abdul Karim Sahib, Native Physician.
14	Do. ...	102	G. Vellones, Civil Apothecary.
15	Do. ...	113	Jagannadha Pandit, Hospital Assistant.
16	Do. ...	114	M. Maduranayagam Pillai, Hospital Assistant.
17	Do. ...	116	J. Parthasarathy Chetty, Hospital Assistant.
18	Do. ...	103	W. H. Daniel, Civil Apothecary.
			Private Practitioners.
19	Do. ...	122	Hakim Nanneh Miyyah, Medical Practitioner.
20	Do. ...	126	H. Rangappa, Medical Practitioner.
			Superiors.
1	Bombay...	73	Surgeon-Major K. R. Kirtikar, Civil Surgeon.
2	Do. ...	74	Surgeon-Colonel D. E. Hughes, Principal Medical Officer.
3	Do. ...	66	Surgeon-Major D. N. Parak, Surgeon to the Gokuldas Tejpal Hospital.
4	Do. ...	65	Brigade-Surgeon-Lieutenant-Colonel J. Arnott, Physician in charge St. George's Hospital.
			Subordinates.
5	Do. ...	76	R. S. Bhikaji Amrit Chobhe, Assistant Surgeon.
6	Do. ..	82	B. H. Nanavatty, Assistant Surgeon, Teacher of Surgery and Midwifery.
7	Do. ...	83	Bhau Succaram, Civil Hospital Assistant.
8	Do. ...	84	Rajani Lokaji, Civil Hospital Assistant.
9	Do. ...	85	Jamitaram Jayashankar, Civil Hospital Assistant.
10	Do. ...	86	Sadashiv Waman, Civil Hospital Assistant.
11	Do. ...	87	Phirozsha Dinsha, Civil Hospital Assistant.
12	Do. ..	89	Parsan Singh, Civil Hospital Assistant.
13	Do. ...	78	Anna Moreshwar Kunte, Assistant Surgeon.
			Private Practitioners.
14	Do. ...	95	Bhalchandra Krishna Bhatavadekar, Medical Practitioner.
15	Do. ...	97	Ardesir Dadabhoy Mody, Medical Practitioner, Member, Municipal Corporation.
16	Do. ...	96	Ismail Jan Mahomed, Medical Practitioner.
17	Do. ...	90	R. B. Vishram Ramji Ghollay, Medical Practitioner.
18	Do. ...	93	Edalji Nasserwanji, Medical Practitioner.
19	Do. ...	94	J. C. Lisboa, Medical Practitioner.
			Superiors.
1	Sind ...	16	Brigade-Surgeon-Lieutenant-Colonel Keith, Civil Surgeon and Superintendent, Lunatic Asylum.
2	Do. ...	15	Brigade-Surgeon-Lieutenant-Colonel Bainbridge, Civil Surgeon.

Serial No.	Province.	No. of witness.	Name and Rank.
			Subordinates.
3	Sind ...	18	E. Mackenzie, Assistant Surgeon.
4	Do. ...	23	Shaikh Ali, Civil Hospital Assistant.
5	Do. ...	20	J. E. Bocarro, Assistant Surgeon, Lecturer, Medical School.
			Private Practitioner.
6	Do. ...	24	Dr. S. M. Kaka, Health Officer.
			Superiors.
1	Berar ...	19	R. B. Roe, Surgeon-Major.
2	Do. ...	22	J. Morrison, Civil Surgeon.
3	Do. ...	24	S. Baijnath, Medical Officer, Mody Hospital.
4	Do. ...	25	J. H. Steinhoff, Medical Officer in charge Charitable Dispensary.
5	Do. ...	23	William John Montgomery, Civil Surgeon.
6	Do. ...	...	Surgeon-Lieutenant-Colonel E. Fawcett, Staff Surgeon.*
			Subordinates.
7	Do. ...	27	M. Doorgiah Pillay, 1st class Hospital Assistant.
8	Do. ...	28	M. Poonambalam Moodeliar, 1st class Hospital Assistant.
9	Do. ...	...	Nubbee Khan, 1st class Hospital Assistant.*
			Private Practitioners.
10	Do. ...	29	R. N. Mudholkar, L. M. & S., Private Medical Practitioner.
11	Do. ...	30	G. V. Khot, L. M., etc., Medical Practitioner.
			Superior.
1	Ajmere ...	3	Surgeon-Major D. Ff. Mullen, Civil Surgeon.
			Subordinate.
2	Do. ...	5	Asghar Ali Khan, Hospital Assistant.
			Private Practitioners.
3	Do. ...	6	Abdul Kayum, Hakim.
4	Do. ...	7	Jati Amar Hansa, Baid.
5	Do. ...	4	Khan Bahadur Dr. Sheik Elahi Bux, Government Pensioner and Honorary Magistrate.
			Subordinates.
1	Bilochistan	4	Mohammad Yusuf, Hospital Assistant.
2	Do. ...	5	Waryam Singh, Hospital Assistant.
3	Do. ...	6	Mohammad Akbar Ali Khan, Senior Hospital Assistant.
4	Do. ...	7	Bhugwan Dass, Hospital Assistant.

* NOTE.—These witnesses are not reported.

STATEMENT III.—*Opinions of some medical witnesses on effects.* (*Paragraph 59 of the note*).

Note.—The italicized words are those that have been quoted in the Report, paragraphs 500 to 509.

Bengal.

1.—Surgeon-Major Macdonald, Civil Surgeon.—*Number of witness*—45.

Q. 45.—The effect of the drug in (*a*) moderation is prejudicial to morality and health of the people, and is apt to run into (*b*) excess, when without doubt it leads to insanity and destruction of brain power, often ending in the commitment of the most atrocious crimes in the way of men running amok as well as in a few instances to sexual atrocities.

2.—Bosonto Kumar Sen, Assistant Surgeon in Civil Medical charge, Bogra.—*Number of witness*—119.

Q. 1.—As a medical man and service in ganja-produced districts.

Q. 45.—*Yes, the use of ganja and bhang produces noxious effects.*

They weaken the constitution and produce loss of appetite.

They generally produce dysentery, asthma, and bronchitis.

They impair the moral sense, indulge laziness or habits of immorality or debauchery. A ganja smoker never talks in any important moral, social, or religious subject, nor does he mix with good people. He has got a circle of his own, where he indulges in loathsome conversation. Ganja produces insanity (mania), both temporary and permanent. In temporary variety the symptoms were seen to recur on use of the drug after liberation from restraint.

The typical symptoms of insanity are excessive talking, constant motion, insomnia, incoherent, trembling and violent and screaming. The insanes generally confess to their taking the drug.

Q. 46.—Ganja produces the symptoms as mentioned under the heading habitual moderate use of the drug in a greater degree

Oral 45.—My first three sentences here deal with the effect of ganja on health generally. My remarks are founded on personal experience. *I have seen more than one person, about half a dozen in my village,* Madhopara, in the Dacca district, *suffering from dysentery, bronchitis, and asthma, who were also ganja smokers. They were all excessive smokers. These effects do not follow the moderate, but the excessive use. It is a mistake to have put them under the moderate use.* It is not always easy, however, to distinguish between the moderate and excessive, because moderation may go to excess. When I see a man I may think he takes it moderately. But when he is diseased I may come to know that he used it in excess stealthily.

All these people were habitual smokers, not occasional. From that I cannot exactly say that they used ganja in excess.

The fact that they were ganja smokers led me to believe that these effects were due to ganja. I have seen many non-smokers suffering from these diseases. There are many causes that bring on dysentery, bronchitis, and asthma. But I did not discover any other causes in these cases. *I have no recollection of ever treating any cases of dysentery, bronchitis or asthma caused by ganja. These cases are the basis of my remarks.* I saw them in my own village with my own eyes. *I do not remember any case of dysentery, bronchitis, or asthma in any ganja smoker which I attributed to any other cause. In other words, where I saw ganja smokers suffering from these diseases I attributed them to ganja. This was twenty years ago, before I was a medical student.*

3.—Russick Lall Dutt, Surgeon-Lieutenant-Colonel, I. M. S., Officiating Civil Surgeon, 24-Parganas.—*Number of witness*—107.

Q. 1.—Personal observation and experiments and intercourse with persons addicted to hemp habits in Bengal.

Q. 39.—The smoking of these preparations affects the nervous system directly, and is hence more injurious than eating or drinking. In the latter case the drug is slowly introduced through the digestive system, and exerts its effects slowly. Smoking is more deleterious to the nervous system, and gives rise to emaciation and other well-known symptoms including insanity, sooner than drinking or eating the same drugs. Here, of course, I take the quantity to be equal both for smoking or drinking or eating purposes.

Q. 42.—Its use is always harmful, as it tends to increased consumption.

Q. 45.—As I previously observed, the habitual use of these drugs tends in most cases to excess. I have, however, seen several instances in hard-working and active men, where *very moderate smoking of ganja or charas or moderate drinking of siddhi*

in infusion do not produce any appreciable effects. Among singers in Bengal, artizans, and mill workmen moderate habit entails no immediate injurious effects, *but these moderate cases are seldom long-lived. There is in them a slow and insidious undermining process going on in their digestive, respiratory, and nervous systems, which predispose them to acute diseases and cut their lives short.* Among these moderate users weak intellect and a dull moral sense are invariably seen. When imperceptibly moderation is exceeded, then symptoms of impairment of the constitution, digestion, and nervous system manifest themselves to the skilled observer.

By habitual moderate use I understand a couple of smokes a day or a tola of siddhi in infusion. Individual instances of slight impairment of body and mind I have seen, but I did not record.

Q. 46.—The use of these drugs tends to excess as previously observed. The effects of siddhi-drinking are slow, but ultimately merge into those arising from ganja or charas smoking. The smoker of ganja or charas is known by his appearance and habits. He is generally emaciated, and walks slowly by the less frequented paths and parts of roads. He is generally taciturn, inoffensive, or skulking in his habits. His face has a sunken appearance, and his eyes are often bloodshot, especially after a smoke, with dilated pupils. Physically, he becomes a ruin; morally, depraved; and mentally, inane or insane. Excessive ganja or charas smoking results generally in two series of disorders—in the young and nervous individuals acute mania, followed by dementia. In the confirmed, old habituals there is gradual deterioration of body and mind, great emaciation, nervous disorders, great timidity, followed by impaired digestion, and, finally, an inveterate form of dysentery, cirrhosis of lung and liver. Ganja is a prolific source of insanity, curable in the young, but incurable in the old.

Q. 49.—These drugs are feeble aphrodisiacs, and are often used by immoral men and women as well as the upper classes of Muhammadans and Hindus who from abuse lose their sexual powers. Medicinally it is not injurious, and as such it is generally used. Excessive habitual use causes impotence. I have seen in more than a dozen instances.

4.—Gordon Price, Surgeon-Lieutenant-Colonel, I. M. S, Civil Surgeon.—*Number of witness*—108.

Q. 1.—During 21 years' service in India have frequently come across consumers of hemp drugs, and have conversed with them and with intelligent natives on the subject.

Q. 42.—I do not look upon the use of any of these drugs as harmless. I think the tendency is for the habit, once commenced, to become excessive and harmful.

Q. 49.—When ganja is smoked to excess, impotence results often in eight to ten years.

Q. 57.—*a.* Regarding the well-known loss of memory caused by the habitual smoking of ganja there is a Bengali proverb:—"Ganja khaley baper nam bhuley jai." He who smokes ganja forgets even his own father's name.

Regarding the difference between the results of bhang and ganja, there is another proverb:—"Sidhi khaley budhibarey; ganja khaley lukhy charey." The man who drinks bhang thrives; he who takes ganja goes to the bad (is deserted by the goddess Lukhi).

Note.—It is said in paragraph 500 of the report that "he was unable to answer the question regarding effects."

5.—J. F. P. McConnell, Professor of Materia Medica, &c., Medical College, Calcutta.—*Number of witness*—103.

Q. 1.—No special opportunities, only such as have arisen in connection with my duties as a Medical Officer serving in Lower Bengal for over 22 years.

Q. 42.—Except as a medicine, I consider their use, even in moderate doses, to be harmful.

6.—Upendra Nath Sen, Officiating Civil Medical Officer.—*Number of witness*—118.

Q. 1.—As a medical man and Superintendent of Jail, I had opportunities of obtaining information regarding matters connected with hemp drugs.

Q. 45.—Bronchitis and asthma are common complaints of ganja smokers.

Q. 46.—I believe habitual moderate or excessive use of ganja, like other forms of self-indulgence, grows into excess, and continued excess impairs the nervous system, throws the mind out of balance, and causes temporary insanity and undermines the constitution.

7.—Devendranath Roy, Teacher of Medical Jurisprudence, Campbell Medical School.—*Number of witness*—123.

Q. 1.—Being in Government service for over twenty years, I have been, among other places, in Rajputana, the North-Western Provinces, Behar, and Bengal, where

hemp drugs are used by a large portion of people. Latterly, since 1884, I have been in charge of a ward of the Campbell Hospital, where, among others, lunatics are treated, and many of them do use those drugs.

Q. 42.—I do not consider it harmless, because it affects the brain. Any agent which causes derangement of it by stupefying it cannot be harmless when such condition is produced habitually.

Q. 45.—*Those who smoke ganja not more than twice or thrice a day* and can afford to get good food *do not suffer in general health;* but the absence of good food will make the ganja smoker deteriorate in health. Mentally and morally all smokers fare alike. They become short-tempered and careless.

Bhang does not impair digestion, whereas ganja does.

Those of my patients who admitted of having been habitual ganja smokers suffered from dysentery or diarrhœa, but they had been exposed to conditions which produce those ailments. Hence I do not draw any conclusion as to ganja being the primary cause of those diseases.

Barring what I have indicated above, I have not seen a moderate ganja smoker becoming lazy or a debauch. Charas stupefies the smoker; hence he becomes indolent and dull to all moral sense.

I do not know of any instance of *moderate use* of hemp drugs producing actual insanity. But it should be remembered what I call moderate use, *i.e.*, two or three times a day.

Insanes who have no recorded ganja history do confess to the use of the drug. This confession comes when the patient is calm enough either to understand or to listen to what is said to him; otherwise nothing can be got out of them, even whether they are hungry or not.

The other portions of this question will be answered in reply to the next question.

I know of persons becoming insane after the use of intoxicating drugs, and ganja especially, and they had no hereditary predisposition.

I do not know of any case in which insanity predisposed to the use of it.

Persons deficient in self-control through weakened intellect will take to any intoxicating drink that they have facility to get, and will contract the habit of using it more easily than any other person.

Hemp, like other narcotics, is not used to soothe the brain. Dr. Reynolds speaks highly of Indian hemp as *sometimes* altogether removing pain in the head from a rare disease, cerebral tumour.

I know of people who, when very young, about 17 or 18 years old, contracted the habit of smoking ganja, and within a short time they became inveterate ganja smokers. After some four years or so they became insane temporarily. There was no family history of nervous disease of any sort.

Q. 53.—Excessive indulgence in ganja does incite to violent crime.

Oral.—If a man used any intoxicating drug often, I would accept that as a cause of the insanity; not necessarily the only cause. I should not consider it necessary to prove actual excess. If he took it habitually, that would be enough. The reason is that I have seen people of weak mind who, if they take any intoxicating drug, go to excess. Hence, when I get the history of any insane taking these drugs, I do not stop to enquire whether it is in excess or not.

8.—Hari Mohan Sen, Assistant Surgeon.—*Number of witness*—128.

Q. 1.—I have made a study of the subject with a view to determine the effects of the drug on the constitution of men. I have made personal investigations and examined cases.

Q. 41.—The fishermen, the boatmen, the dak-runners, the palki-bearers, and the sweepers consume ganja under the idea that it gives them staying-power under severe exertions or exposure and alleviates fatigue. It is a mistaken idea. It simply deadens the feelings and sensibilities. While under its influence a man may bring into use all the strength in him without feeling bad till all his strength is drained away, and he is left a complete wreck. Just as a man with a paralysed hand (the sensibility only being affected) would handle a piece of live charcoal till the hand is charred and dead and useless, he never feeling at any moment what had been coming on. This is the case with the insufficiently fed, poor, hard-working men. Those who can afford to eat up to the standard may keep off the injurious effects of the drug for a time, but ultimately they do succumb as well. I refer to the habitual use of the drug.

Q. 45.—Yes, ganja and charas particularly.

Ganja impairs the constitution in more than one way.

Yes.

Yes.

Yes; a ganja-smoker is never a moral being. He or she is generally a debauchee. He is active as long as he lasts.

It does not deaden the intellect altogether. It produces insanity of a violent type, which generally has a religious element in it. It is often permanent.

A man takes to ganja-smoking not with a hope to obtain relief from mental anxieties, but for forgetting his physical wants when he is ill-fed and hard-worked, or for driving away the heaviness from an unoccupied mind, or for stimulating the carnal desires when he has got more than enough to enjoy.

Q. 46.—Excessive ganja-smoking would occasionally cause temporary insanity, a mania of homicidal character. A man would commit murder under its influence. The habitual excessive use completely ruins a man, his intellect is gone, his moral faculties are dead, and his constitution is a wreck.

The effects of bhang-drinking on a man who never had it before are horrid. He never forgets them after he had experienced them once.

Q. 49.—Yes. It is so used by the prostitutes. Its use for this purpose is more injurious, or it has to be taken in less increasing doses to keep up the exciting effect till the excessive excitement ends in impotence as its just reaction.

Q. 51.—A large proportion of bad characters are habitual moderate consumers of ganja and siddhi. Moderate use deadens the moral faculty. Excessive use excites the will power to a high pitch and a man may commit any act of daring while so excited.

Q. 62.—It should be stopped as far as the Government is concerned. The people may cultivate a little for their private use or for medicinal purposes.

Q. 63.—The cultivation of the plant or the sale of the articles should not be in the hands of the Government. No countenance whatever should be given to the use of the drug.

Q. 64.—I asked a ganja-smoker why he did take to the use of it. He said because it was brought to him; otherwise he would never have sought it out.

Q. 68.—There are shops licensed for the sale of these drugs. These shops should be closed.

9.—Durga Dass Lahiri, Medical Practitioner.—*Number of witness*—132.

Q. 1.—From persons using hemp drugs.

Q. 45.—No.

No.
No.
No.
No. } *I have not seen any evil result mentioned when taken moderately, but it is very difficult to keep the moderation.*

Q. 46.—All the faculties—mental, physical, and moral—are impaired by the excessive use of the ganja-smoking.

Q. 50.—The excessive use of the drug produces impotency and other injurious effects.

10.—Bijoya Ratna Sen, Kaviraj.—*Number of witness*—151.

Q. 1.—My replies are based to a considerable extent on my own experience in connection with my professional attainments.

Q. 45.—The habitual moderate use of ganja or charas, but not of siddhi, may in some cases produce noxious effects, physically, mentally, and morally. It impairs the constitution. It injures the digestive power, and creates *dysentry, bronchitis, asthma*, &c. It also impairs the moral sense and induces laziness, immorality, and debauchery.. It may also produce insanity both temporarily and permanently.

Q. 46.—The habitual excessive use of ganja and charas is generally found to cause all the above diseases.

11.—Ganga Pershad Sen, Kaviratna, Kaviraj.—*Number of witness*—152.

Q. 1.—My replies are based to a considerable extent on my own experience in connection with my professional attainments.

Q. 45.—The habitual moderate use of ganja or charas, but not of siddhi, may in some cases produce noxious effects, physically, mentally, and morally.

It impairs the constitution.

It injures the digestive power.

It creates bronchitis, dysentery, and asthma. It also impairs the moral sense and induces laziness, immorality, and debauchery.

It produces insanity, both temporarily and permanently.

Q. 46.—The habitual excessive use of ganja and charas is generally found to cause all the above diseases.

12.—D. Morison, M.B., C.M., M.D., Glasgow, Medical Missionary.—*Number of witness*—133.

Q. 1.—I have lived for about fifteen years in Rampore Bouleah, and have had occasion to give the matter some attention, medically, socially, and morally. I am acquainted with the medicinal properties of the drug, and have observed its effects physically and morally on some natives, in whom I am interested as head of this mission.

Q. 41.—The moderate use of ganja is not beneficial in any way whatever—

(*a*) It overstimulates the appetite, causing the smoker to gorge himself with food which he cannot digest, and thus leading to indigestion.

(*b*) It does give staying-power, but the reaction is severe. It demands the stimulant again, or the smoker is quite helpless and useless.

(*c*) It is never used as a febrifuge; indeed, if a ganja-smoker has an attack of fever, he dare not indulge in his usual pipe, as it aggravates his condition. The ganja-smoker is as liable to fever as others. It has no prophylactic power in malarious districts.

Q. 42.—I do not consider the smoking of ganja harmless even in moderation.

Q. 45.—(1) It impairs the physical organism, saps the muscular energy by overstimulation, and leads to loss of muscular vigour, producing emaciation.

(2) It produces severe constipation, which causes indigestion and impairment of the alimentary functions.

(3) The constipation leads to dysentery by retention of fæces in the bowel.

(4) In old smokers asthma and bronchitis are common, especially asthma.

(5) It utterly demoralizes a young lad.

Q. 52.—The smoker who uses the drug to excess will ruin his home by selling off his goats, cows, and effects rather than do without it. He thus becomes its slave, and may be induced by the craving to steal to supply his wants.

13.—Pyari Sankar Dass Gupta, L.M.S., Medical Practitioner, Secretary, Bogra Medical Society.—*Number of witness**—134.

Q. 1.—I am a medical practitioner, and have personally observed cases of ganja intoxication.

Q. 43.—Even moderate smokers get intoxicated, and their rude behaviour makes them repulsive to their neighbours.

Q. 45.—Its moderate habitual use is also attended with baneful results.

It undoubtedly produces injurious results to the constitution; even strong men are pulled down by its continual use. A lean, haggard, rude face, with eyes red and in the socket, a bony frame, indicates a ganja-smoker.

It first produces increased appetite, not satisfied by any food, and its long-continued use, loss of appetite.

Ganja-smokers generally die of bloody dysentery, asthma, and phthisis, and hæmoptysis, &c.

Ringer says: "Indulged in for a long time, it produces loss of strength, trembling, and much mental weakness."

Of all the ganja-smokers that I have seen, I have not seen any moral or religious man taking intelligent interest in any good subject.

It produces insanity, generally mania. Delusions of senses, a sort of dual consciousness, give succession to unsound mind. Healthy boys have been attacked after a debauch, and restored to health on discontinuing it. I have also seen a menial spending his last pie in the ganja shop.

Q. 46.—Excessive smokers generally ruin their health sooner, hastening their death, or soon getting into a state of *non compos mentis*, and become inmates of lunatic asylums, whose statistics will amply show the truth of the assertion.

In my opinion Indian hemp is a drug which has very few things to be spoken of in its favour, and its growth and use in any shape is an unmixed evil. It is true that it has certain medicinal properties, but it does not necessarily follow that it should be habitually used, for the most inveterate poisons are sometimes the most valuable restorers of life.

In conclusion, I beg to bring to the notice of the Commission that, as the mission of the benign English Government is to deliver a degraded people from centuries of degradation, it is high time to remove such a pernicious article from its patronage, and remove a temptation from the path of the misguided and weak people who are ruining their families and themselves by this most degrading habit. It is a scandal that such a pernicious thing is yet allowed to exist under so civilized, benevolent and Christian Government.

* NOTE.—The evidence of this witness is important and the whole is worth reading. Here an extract only has been given.

14.—Piyari Mohan Kaviraj, Native Physician.—*Number of witness*—154.

Q. 45.—Yes; it causes constipation, affects the brain, and consequently leads the consumer to commit acts of criminality.

Yes; it impairs the constitution.

Yes, it injures the digestion and finally causes loss of appetite.

Yes, *I know it causes dysentery, and I believe owing to its heating power it can cause bronchitis or asthma.*

Yes, it impairs the moral sense and induces laziness and habits of immorality, as it affects the brain.

I have come across several cases in which the excessive use of ganja and siddhi has produced insanity. In those cases it has appeared to me to be both the exciting and the predisposing cause. Insanity produced by it is of the same type as ordinary insanity. In some cases it was temporary and in others permanent. The symptoms may be re-induced by the use of the drug after liberation from restraint. Yes; persons deficient in self-control through weak intellect are most apt to get insanity by the use of hemp drugs.

15.—Dr. Mohammad Sadrul Haq, Medical Practitioner.—*Number of witness from*—139.

Q. 37.—There is no difference of any particular type in their injurious effects; but the effects of charas are more powerful and lasting and those of bhang are mild. Charas and ganja act on the brain and spinal cord, paralyzing more or less motor and sensory nerves; consequently the loss of energy, exertion, appetite, and sexual power, and also timidity, laziness, and emaciation, are their ultimate results.

Q. 41.—The use of any of these preparations have always been injurious.

(*a*) None of these is ever used as an accessory or digestive food.

(*b*) It does not produce staying power nor does it alleviate fatigue.

(*c*) They are never used as febrifuge.

Q. 42.—The use of these drugs is never without any harm.

Q. 45.—*Certainly they produce noxious effects on the moral and physical constitution.*

16.—Trailokya Nath Majumdar, L.M.S., Medical Practitioner.—*Number of witness*—140.

Q. 1.—From cases that have come under my observation in the capacity of a private citizen as well as a medical practitioner.

Q. 37.—Ganja-smoking cannot be easily given up, whilst the habit of drinking bhang can; the habit in the former case is more readily formed than in the latter.

Ganja-smoking is always injurious to health, whilst bhang is not so. On the other hand, bhang, if taken in moderate quantity, keeps the digestive organs in good order. Ganja has a tendency to deprave the morals of a man. Bhang does not do so. Ganja-smoking carried to excess causes in most cases insanity. Bhang does not affect the system so injuriously. Ganja has a tendency to affect the respiratory system, thereby causing in many cases asthma and bronchitis.

Q. 48.—In cases of insanity of a permanent nature, caused by excessive smoking, any issue after the insanity has become permanent may be similarly affected.

17.—Prasad Das Mallik, Doctor.—*Number of witness*—141.

Q. 1.—Special study, observation, and enquiry have furnished me with information regarding matters connected with hemp drugs, which forms the basis of my answers.

Q. 45.—Yes, it impairs the constitution after long use, causes loss of appetite and injures digestion. May be an indirect cause of bronchitis, dysentery, and asthma. Impairs the moral sense, induces laziness, and leads to insanity and debauchery. It deadens the intellect and produces insanity only in those who are predisposed to it or whose nervous system is weak and exciteable. The insanity is, as a rule, of the violent type and is temporary. The symptoms may be re-induced by use of the drug after liberation from restraint. A murderous propensity is a typical symptom of this form of insanity. Yes, insanes confess to the use of the drug, though they have no recorded ganja history.

Q 46.—The bad effects are more marked. Most cases of insanity are to be attributed to the habitual excessive use of ganja.

Q. 50.—The excessive use of any of these drugs leads to impotence.

18.—Nimai Charan Das, Medical Practitioner.—*Number of witness*—142.

Q. 45.—Yes; it impairs constitution.

Yes.

Yes.

Certainly it does.

Yes; they deaden the intellect and produce temporary insanity.

Q. 49.—Yes; they are used by the prostitutes as an aphrodisiac.

Hemp, if taken for a long time, produces impotence.

19.—Durga Nath Chakravarti, Assistant Surgeon in charge of Tongail Dispensary (Mymensingh).—*Number of witness*—150.

Q. 1.—I am a resident of Tongail and practising here for these fifteen years. Ganja consumption is very great here. I have seen many ganja-smokers myself.

Q. 42.—I do not think their moderate use to be beneficial and necessary. They are not essential for the sustenance of our health and life.

Q. 45.—Produces a tendency to take in excess.

No.

Ganja causes dysentery after a long use.

Generally not. Occasionally we meet such cases.

Yes. It is only after a long use. I saw only one case. It is of a permanent type. Temporary type is not rare. A man often forgets of his action under ganja when in sane moments.

Q. 46.—I have seen some twenty persons who became insane under excessive ganja-smoking. Some of them are raving mad. The madness is permanent. They get temporary excitements. Somewhere these excitements were due to the temporary abstinence of the drug and somewhere to their excessive use. In the neighbourhood of my residence a woman of middle class died from dysentery and was a hard ganja smoker. Her one son, a hard ganja smoker, became stark mad, and another son, a very good intelligent man, a few years since has become insane. They keep up intelligence and reasoning power except during excitement, but are incapable to conduct business and to manage their own affairs and cannot be in any way trusted.

20.—Tara Nath Bal, L.M.S., Medical Practitioner, Bengal.—*Number of witness*—143.

Q. 1—As a medical practitioner I have had to come in contact with different classes of people from highest to lowest, from Rajah Maharajah to the meanest cultivator with whose habits and customs it is essential on my part to become thoroughly acquainted.

Q. 45.—Yes.

Yes.

It causes dysentery and bronchitis; a ganja-smoker generally (of course habitual consumer) dies of dysentery.

To a considerable extent.

Moderate use of the drug, particularly ganja, continuously may not utterly deaden the intellect, but certainly it is impaired considerably. It is an established fact, and supported by many an Indian authority on the subject, that ganja is one of the chief causes of insanity; in my opinion, it appears to be an exciting cause. Generally it produces insanity of a violent type. Majority of habitual consumers become permanently insane, never to be cured. Some become temporarily so, and become sane on breaking off the habit. Symptoms are apt to be re-induced on resuming the habit. I am aware of one person, by name Bhakta Poddar, in this district, who was a confirmed ganja smoker, to become insane under its continuous use, and he was not fit for any duty in life; but after some years I found him sane. On inquiry I learnt that some mental anxiety about some family matters tended to give rise to indulgence in the use of ganja. I am not in a position to declare positively whether this question has been sufficiently considerea in explaining the connection between insanity and the use of ganja.

Q. 46.—To this question I should reply that what has been said about the habitual moderate use of the drug (ganja) on the consumers appears in the aggravated form in cases of habitual excessive use, and the effects apt to be more rapid in these cases.

Q. 57.—(*a*).As a nearly permanent resident of the district I am in a position to say, both from information obtained through reliable sources and from personal observation, that the use of ganja is very extensive in the district among low class people. I am of opinion that bhang is less injurious than ganja, and it is rarely apt to be taken to excess. Under several heads I have expressed opinions regarding effects on human beings produced by the moderate and excessive use of the drug habitually—opinions formed by study of pharmacology, personal observation, and occasionally experiment on my own person and from all these I am led to believe that these drugs, except for *bonâ fide* medicinal purposes, are more or less injurious in their effects on the human body.

21.—Nocoor Chander Banerji, Medical Practitioner.—*Number of witness*—144.

Q. 1.—I was in the medical service of Government and am now in medical practice. More than 26 years have passed away during which I am engaged in medical profession.

Q. 42.—Moderate use is beneficial under such conditions, but through the continued use it becomes harmful. There is another danger, as from the moderate use it leads to excessive consumption, and is thus productive of the pathogenetic effects of the drugs.

45. Yes; the habitual moderate use of any of these drugs produces noxious effects. It impairs constitution, injures digestion, or causes loss of appetite. It causes bronchitis, dysentery, and asthma. It impairs moral sense, induces laziness, and habits of debauchery are formed. It produces ill-effects on the brain, producing insanity. It might prove as an exciting cause of insanity where there is heredity of the disease.

(*Note.*—The witness has cited several cases.)

22.—Luchmy Narain Naik, Medical Practitioner.—*Number of witness*—145.

Q. 1.—I was educated in the Government Medical School at Cuttack, and got the diploma of V. L. M. S. (Vernacular Class Hospital Assistant). I am 32 years of age, and I have been practising medicine for the last ten years privately.

Q. 42.—It is not at all beneficial; on the contrary harmful, as it disturbs the proper actions and disorganizes the proper functions of some useful organs.

Q. 45.—Yes, it produces noxious effects mentally, morally, and physically. It affects the lungs and also produces insanity, which has been mentioned above. I am told a man in the habit of smoking ganja murdered his mother just after smoking, and afterwards, when the reaction set in, looking at the stream of blood flowing from his wounded mother, went to murder the man by whom he was induced to the habit of smoking ganja.

Q. 45.—Moderate use of ganja leads to the excessive use. *The habitual moderate consumers as well as the excessive consumers suffer in their lungs and become insane.* My definition of a moderate consumer is a man who takes as much as his habit has enabled him to stand without becoming insensible. A man who takes two pice worth is moderate, and a man who takes two annas worth may be moderate for him, *i.e.*, if he can stand it. *No intoxicant can be taken in moderation except when administered medicinally.*

23.—Surgeon-Captain J. C. Vaughan, T. G. Charles, Esq., District Superintendent of Police, Haji Imdad Ali, Sub-Committee District Board, Monghyr.—*Number of witness*—250.

Q. 45.—The habitual moderate use of bhang is held to be not injurious.

With regard to ganja—

(*a*) It affects the physique and gradually impairs digestion. If moderately used, increases appetite. Without proper food must weaken digestion; causes dysentery if used in excess. Produces laziness, but not immorality or debauchery.

If used in excess, deadens the intellect and produces insanity of a permanent type: sometimes with melancholia and other times with a homicidal tendency.

24.—Girish Chandar De, L.M.S.—*Number of witness*—237.

I have seen so much of the evils caused by the drugs that restriction appears to me necessary. I have found people become pale and emaciated on beginning to smoke ganja, and after three or four months to become thoroughly changed for the worse, mentally and physically. I judge that these are the effects of the drug, because people before using the drugs were healthy and bright and intelligent. I have seen their effects in members of families I have visited in the course of my practice. I can remember at least a dozen cases which showed the above changes in three months. All these were sons of families I visited, and, except in one case, the other members of the families did not smoke. The young men were scapegraces, who had taken to evil courses against the will of their families.

Kalighat is probably worse than any other part of Calcutta in the matter of ganja-smoking, and it is the evil effects I have seen there which make my heart bleed and make me wish to lay my views regarding restriction before Government.

Ganja is worse than alcohol. Alcohol does not make people so utterly useless and worthless as ganja does, at least among respectable families. Among the lower classes also, I think, ganja is the more harmful. This is my experience in Kalighat.

Punjab.

1.—Surgeon-Major J. A. Cunningham, M.D., I.M.S., Civil Surgeon.—*Number of witness*—35.

Q. 1.—I have been for six months in charge of the lunatic asylum at Delhi, 18 months in charge of that at Lahore, and have been for over twelve years in the service in India.

Q. 42.—I consider the moderate habitual use of hemp drugs to be harmful. I consider the tendency to be towards excess; and excessive use is certainly productive of insanity in persons probably predisposed. The habitual use of hemp drugs leads to wasting of the tissues either by its direct action or from insufficient food being taken. It also predisposes to, or causes, chest affections

Q. 45.—The habitual moderate use in a person liable to insanity would tend to bring on insanity.

It also tends to wasting of the tissues and emaciation. No moral defects. The constitution is weakened.

Charas and ganja smoked would impair digestion. *Charas and ganja smoked cause chest affections, but not "dysentery."*

It would induce laziness and want of thrift, which is a moral defect. Would not induce active immorality or debauchery.

It dulls the intellect, and in predisposed persons produces insanity of the mania type, usually temporary, unless some organic cause also exists. In temporary cases symptoms would be reinduced by use of the drug. There are no special symptoms. Insanes who were addicted to the use of the drug admit it and crave for it.

I do not think that the moderate use of the drug would induce insanity in a person of strong and healthy intellect, but in unstable people I think it might do so.

I do not think that weakness of intellect often leads to the use of the drug in this country; but, when such people use it, they are likely to lose their balance.

Having severed my connection with lunatic asylums before the appointment of this Commission, I made no special enquiries or investigations on this point, and my impressions gained during ordinary observation guide me in the opinions above expressed.

Q. 46.—The excessive use of the drugs would have a much greater and more deleterious effect than the moderate use, and would probably be quite sufficient to cause insanity or serious disease in originally quite healthy people. It would greatly impair moral sense and tend to debauchery, just as excessive indulgence in alcohol notoriously does.

The use of the drugs tends to produce impotence.

2.—Rahim Khan, Khan Bahadur, Honorary Surgeon, Superintendent, Medical School, Lahore.—*Number of witness*—37.

Q. 1.—My long residence in the Punjab (33 years), and my connection with the out door department of the Lahore Medical College Hospital for the same period, have afforded me ample opportunities of obtaining information regarding the uses and effects and other matters in connection with hemp drugs.

Q. 45.—Charas.—Even the habitual *moderate use of charas brings on chest affection,* and incapacitates the consumer for work.

Mentally, charas impairs the intellect, and may bring on insanity.

Morally, it makes him despicable and shameless, and, being incapable for work, he either takes to thieving or begging alms.

When charas produces insanity it is generally temporary, and the symptoms may be re-induced by use of the drug after liberation from restraint. The insanity is of the type of melancholia or dementia. There are no typical symptoms that I know of.

Q 46.—Since the habitual moderate use of charas is injurious physically and morally, the habitual excessive use of the drug must bring on those symptoms in an aggravated. form and in less time.

Oral 45.—I do believe that even the moderate use of charas may cause insanity. The basis of this opinion is that in my experience "charasis," as a rule, become very irritable. *I call ten or twelve chillums, costing one or two annas in the 24 hours moderate use. I know of no more moderate use than that. I know of no case of a man using only one or two chillums a day. I would call a man taking one or two annas worth a day a "charasi."*

3.—Surgeon-Major Geo. Dennys, Superintendent of the Lunatic Asylum at Delhi.—*Number of witness*—34.

Q. 1.—I have been a Civil Surgeon in the Punjab during the last 11½ years, and for the last three years have held charge of the lunatic asylum at Delhi. In the latter appointment I have had exceptional opportunities of studying the symptoms of toxic insanity due to the use of hemp drugs.

Q. 42.—I have known several natives who occasionally indulged in bhang as a drink and seem to be none the worse for it. Charas-smokers, on the contrary, nearly always appear more or less weak-minded, have bad memories, and are eccentric in their habits, if not actually insane.

Q. 45.—Charas-smokers, even in moderation, are generally emaciated and in poor health, and are depraved creatures both mentally and physically. This is not the case with moderate consumers of bhang as far as I have been able to gather. The excessive habitual use of charas and bhang does, in my opinion, tend to produce insanity in individuals who have a predisposition that way, but I do not think the drug would cause insanity in every case, even when indulged in very largely. It is the exciting cause, not the predisposing cause. The insanity is nearly of an excitable noisy kind. The patient talks incoherently, is restless, sings or weeps, and is never still for a moment. He has no particular delusions or hallucinations, but loses all sense of modesty and decency, is filthy in his habits, and often abusive and violent, though I have never known a lunatic of this kind do any actual harm to any one.

He is seldom or never homicidally or suicidally inclined. There are no symptoms peculiar to this form of insanity. The large proportion of cases I have seen were people of low caste and with little or no education. I do not think mental disease or anxiety tends to make a man resort to hemp. Toxic insanes always readily admit having used the drug. The insanity is temporary and the patients always recover if kept away from the drug, but there is tendency to a return to the habit when released from the asylum, and in such cases the patient generally becomes insane again after a short time.

Q. 53. Oral.—[My two papers may be amalgamated as one.] For "insane" the word "weak-minded" should be substituted. My experience of charas-smokers is in the asylum and in the jails. In the jails I find them utterly useless. The man tells you he smokes because he hopes to get off work, for a charas-smoker is a useless man with rotten physique: he is emaciated and unfit for hard labour. My remark applies to moderate as well as excessive smokers. I know a fakir who professes to be a moderate smoker. I do not know where to draw the line between moderate and immoderate. It really depends on how often and how rapidly a man inhales the smoke from his chillum.

4.—Surgeon-Major T. E. L. Bate, Inspector-General of Prisons, Punjab.—*Number of witness*—32.

Q 45.—While in charge of the Delhi Lunatic Asylum I saw many cases of insanity in which the patients and their friends attributed the condition to the use of one or other of these drugs. In my experience such cases recover quickly. I believe that mental anxiety, excessive ganja or charas smoking, and insanity constitute a not uncommon sequence of events. Persons suffering from mania induced by the use of these drugs are generally talkative and not uncommonly indecent in their behaviour. Many of the persons I saw suffering from the use of these drugs were of distinctly weak intellect, but I am unable to say to what extent this condition was natural or induced by the practice.

Q. 46.—There can, I believe, be no doubt that the excessive use of these drugs is distinctly harmful. Charas-smokers not uncommonly present a very cachectic appearance; but it is difficult to say how far this may be due to the habit or to some other condition of life. It may often be the case of a weakly individual taking to a habit for the temporary relief or strength it affords him.

Q. 48.—I believe the *habitual excessive use* of these drugs renders the consumers more or less impotent. Excessive charas-smokers commonly remain celibate.

5.—Dr. H. M. Clark.—*Number of witness*—46.

I am a Doctor of Medicine and Master of Surgery of the University of Edinburgh. My experience of India is confined to the Central Punjab. I have been a medical missionary in connection with the Church Missionary Society since 1882 with my head quarters at Amritsar, and have done a great deal of work in the villages of the Amritsar and parts of the Sialkot and Gurdaspur districts.

The hemp drugs are true narcotics like alcohol and opium. As far as my experience goes, the effects of hemp are always and altogether bad. It is neither a food nor a work-producer. It is a stimulant of the worst sort. If it is smoked in the form of charas its effects are very much more speedy and the ruin more complete than if it is drunk or eaten as bhang or majum. Majum is the least deleterious of the three as it is eaten, while bhang is drunk and charas smoked I can find no other word to describe the effects of charas than that they are frightful. It is ruinous mentally, morally, and physically. It produces a peculiar emaciation which can never be forgotten when once seen. It is largely a determining cause of insanity in this country. The effects of the drug as eaten and drunk do not appear so soon and are not so well marked, though they are the same in kind. All, if persisted in, produce ruin in the man.

As regards charas, I think there can be no such thing as moderate use, if we mean such use as will not leave any permanent bad effect on the system. In whatever quantity it is used it is bound to be deleterious. My experience is probably wider among the private life of the people than among patients at dispensaries. The former sort of intercourse has been principally in the villages, because it is there that I meet fakirs and devotees, who are the chief consumers. The peasantry do not use the drug to any large extent.

My impressions are based both on my experience and my medical knowledge. My experience of the effects of charas is mainly derived from cases of consumption by fakirs and other religious devotees. I have not had any of these persons under prolonged observation, but I have observed them long enough to form an estimate of their health.

I believe it is possible to use bhang and majum in moderation and without bad effects; but from what I have seen I cannot believe that a moderate use of charas is possible. I have known men to use bhang quite moderately.

6.—Thakur Das, Rai Bahadur, Assistant Surgeon.—*Number of witness*—39.

Q. 45.—Moderate habitual use of bhang is probably quite free from any noxious effects—physically, morally, or mentally.

Not bhang.

Not bhang, *but abuse of charas brings on bronchitis and asthma.*

No; except probably slight laziness in those who already enjoy sedentary habits.

Long-continued use of charas contributes a fair proportion to the inmates of lunatic asylums. They are generally maniacs, and in many cases it is temporary. The symptoms may be reinduced by use of the drug. I have known insanes confess use of charas.

In mental anxiety and brain diseases bhang is useful for its soothing effects.

7.—Rai Bahadur Mehr Chand, Assistant Surgeon.—*Number of witness*—40.

Q. 1.—I have been in Jullunder and Amritsar districts for the past eighteen years, where I obtained information regarding matters connected with hemp drugs.

Q. 42.—The moderate use of bhang is not injurious, and it produces no ill-effects on the vital organs of the body.

Charas is injurious because it affects the brain primarily and the general constitution secondarily.

Q. 43.—Moderate consumers of bhang are inoffensive to their neighbours. Charas smokers are, no doubt, a nuisance to the public.

Q. 45.—The moderate use of bhang produces no noxious effect. Charas, if used moderately, is very injurious. It produces general weakness of the brain, leading to insomnia, impairs vision; *brings on bronchitis and asthma, and general irritation of the respiratory organs, indigestion and dysentery.* It impairs moral sense and induces laziness. It deadens intellect, and in some cases causes insanity, melancholia, and, in a few cases, mania. In many cases the insanity is temporary, while in a few it is permanent. If temporary, the symptoms are again brought on by use of the drug. After liberation from restraint the symptoms are generally of melancholic nature. The people in this province don't use ganja, as insanity is specially due to charas-smoking. I don't know any cases of insanity relieved by the use of hemp; nor do I know any cases in which insanity brought on indulgence in the use of hemp by a person of weakened intellect.

Q. 46.—The excessive use, even of bhang, would lead to the symptoms mentioned in answer to question 45, and the excessive use of charas would produce the worst results as stated above.

Q. 45. Oral.—The moderate use of charas may exceptionally produce insanity; but my remarks as to effects refer mainly to the excessive use. Moderate use would only produce insanity in the case of persons with weak intellect. By that I mean taking the drug to the extent of one or two chillums.

My experience is based on persons coming as patients to the hospital. *As to dysentery, I saw a case of a man who said he was a charas-smoker, and took an excessive dose, and it brought on dysentery. I had doubts as to this being the cause. But I think charas may injure the digestion and predispose to diarrhœa or dysentery. I have not enough of cases to be able to say that the drug really produces dysentery. I am not certain. But I have had a case or two with allegations as to this being the cause, and I had no other cause. I ought to say rather " it may produce " than " it does produce " dysentery.*

8.—Jassa Ram, Hospital Assistant.—*Number of witness*—42.

Q. 1.—I am serving in the Dera Ghazi Khan district as native doctor since the last thirty years. My information is based on local knowledge and on personal experience gained by coming in contact with the general public.

Q. 45.—Charas-smoking causes asthma, loss of appetite, and brain diseases. It also induces debauchery.

Q. 46.—The excessive charas-smoking dims the eyesight, causes general debility. The same is the case with bhang. Laziness and forgetfulness follow as a matter of course. The excessive consumer of bhang or charas cannot even earn his livelihood to satisfy his wants.

Q. 49.—The moderate consumption of bhang or charas is sometimes certainly practised as an aphrodisiac by prostitutes and immoral women. The use of the hemp plant produces impotency.

9.—Jhande Khan, Hospital Assistant, No. 57, City New Branch Dispensary.—*Number of witness*—43.

Q. 1.—In private practice I have often treated patients who were habitual consumers of the drugs (bhang, charas and ganja), and am therefore in a position to answer the question by my personal experience.

Q. 44.—The use of these three drugs produces intoxication, makes the head giddy, creates appetite and refreshes the consumers. The lasting of the intoxication depends upon the quantity used and the habits of the consumers.

Q. 45.—*The moderate use of these drugs is likely to produce injurious effects*—physical, mental, and moral.

Yes; the body becomes emaciated and weak.

It first sharpens the appetite and afterwards injures digestion.

Yes.

Yes; but it does not produce the habit of debauchery.

Yes.

Yes; it first produces temporary insanity, which is the cause of developing into permanent insanity afterwards. The lunatics, after their release from the lunatic asylums, are liable to become insane again by the use of these drugs. Such lunatics are in the habit of laughing much, and this disease is called "laughing insanity."

Q. 46.—The habitual excessive consumers become quite worthless and mad.

Q. 49.—No; the prostitutes often use it as a sedative. The use of hemp produces impotence.

Q. 56.—Moderation also produces injurious effects, and there is a tendency for excess, the consequences of which are worse than those of the former.

10.—Ram Narain, Assistant Surgeon, Delhi.—*Number of witness*—41.

Q. 42.—Habitual use of either of these drugs even in moderation, affects the mind to some extent. I know a good many of the habitual consumers, and I have noticed that they are dull headed and have bad memories. Several of them are eccentric and seem to have some aberration of mind.

Q. 45. The charas smokers (even moderate) do not look strong and healthy. As the use of this is among the low classes, whose morals are doubtful even prior to its use, it cannot be said with certainty whether charas-smoking causes immorality, sometimes seen in them, or the influence of society. Their mental powers become deranged, and *bronchitis and asthma are also often met with in them.*

Excessive use of charas produces lung affections and insanity. I have seen many charasis who, though not so insane and violent as to be kept in a lunatic asylum, have some mental aberration. They wander about the city and wherever they find any party of charasis mix with them and smoke. They keep themselves on begging. Some of these are considered to be men who have acquired supernatural powers. They are called fakirs of the high order and worshipped wherever they go.

In connection with the use of these drugs and the insanity, I may mention the case of a man whom I know from my boyhood and who lives in the same street where I live. He is a Brahmin by caste, and his name is Gojar. He has been several times in Delhi lunatic asylum. He was a very strong man before he commenced charas-smoking (a regular pahlwan and athletic) For several years he smoked charas and drunk bhang as well, and then began to show symptoms of insanity. These were at first very wild, and he was quite inoffensive. When he became violent he was sent to the lunatic asylum, from where he returned several times as cured. But soon after his return he began smoking charas and again became maniac.

His insanity now is periodic and the symptoms of insanity are re-induced by the use of charas. When he is all right he does his work very well and speaks very civilly to every body. The first symptoms of the disease shown by his considering himself a king or a god, and by his going to Marghat, a place near Jumna river, where Hindus burn their dead bodies.

11.—Assistant Surgeon Sahib Ditta, Government service, in medical charge of hospital, Multan.—*Number of witness*—38.

Q. 1.—During my service of over 26 years I have known many a people who consume hemp drugs (bhang particularly).

Q. 45.—Yes, ganja and charas do, but not bhang.

Yes, ganja and charas do.

Yes, ganja and charas do.

Not known.

Ganja and charas, it is said, do.

Yes, it is said so.

Q. 49.—Yes, ganja and charas tend to produce impotence.

Q. 51.—Yes, bad characters in large towns are often moderate habitual consumers of bhang, charas, &c.

12.—Karm Elahi, Hospital Assistant, Lahore.—*Number of witness*—44.

Q. 1.—By practice of 25 years, out of which for 13 years I have had charge of the Civil Hospital at Jhelum with a population of 16,000 souls.

Q. 42.—The habit of moderate use of these drugs is not without a harm. The habit of these drugs weakens the constitution and energy and makes lazy The subjects of the habit become indifferent in temper. Their faces become withered up and pale eyes peculiar and not fully attentive to their work. But bhang does not affect the system to such extent as ganja and charas.

Q. 45.—Yes; *the moderate use of these drugs to some extent produce the noxious effects,* physical, mental, and moral.

Yes; it weakens the constitution.

Yes; it injures the digestion and causes loss of appetite subsequently.

I have not seen a single case of dysentery caused by the practice; of course, cases of chronic *cough and asthma.* Yes; it impairs the moral senses and induces laziness or habit of immorality or debauchery, whether through the influence of the drug or of the society. Yes; it affects the intellects and to some extent is productive of insanity, if taken in large quantity and for a long time. Under these circumstances, as far as I can think, it serves as an exciting cause, because the insanity has only been noticed amongst men previously indifferent in temper or rather of melancholy appearance.

13.—Gopal Dass, Hospital Assistant and Deputy Superintendent, Lunatic Asylum, Delhi.—*Number of witness*—45.

Q. 1.—I have been a Hospital Assistant in Punjab during the last 19 years, and for the last 16 months have held charge of the Lunatic Asylum, Delhi.

Q. 42.—The daily use of all these drugs is injurious to mental-physical strength of the human body.

Q. 45.—The charas-smokers are generally emaciated and weaker, and depress their intellectual powers. This always produces cough and loss of appetite. It impairs the moral sense and induces habit of immorality. All kinds of hemp drugs can produce insanity. In some cases it becomes an exciting cause and in others a predisposing cause of insanity.

It produces temporary insanity, not permanent. The symptoms can be re-induced by use of the drug after release from the asylum, and several lunatics of this kind are re-admitted in the asylum many times.

The insanity is always of an excitable and noisy kind; the patient sometimes sings and at other times weeps.

Q. 46. The habitual and excessive use of charas certainly produces toxic insanity.

14.—Babu Hem Chandra Sen, L.M.S., Medical Practitioner.—*Number of witness*—48.

Q. 1.—I have had frequent occasions to treat confirmed charas-smokers, and cases of insanity brought about by ganja-smoking as well as cases of bhang-poisoning with dhatura.

Q. 42.—These drugs are never harmless, as they gradually produce seminal weakness and deaden the intellectual faculties. These effects are produced gradually by constant use, as we find it makes people unfit for work, physical or mental.

Q. 45.—The habitual moderate use of these drugs, when taken in moderation, are found to impair the constitution physically by causing depression of spirits; it brings on languor and lassitude *Charas and ganja always bring on bronchitis and asthma if very large quantities are smoked. It brings on dysentery also.* It first of all produces false appetite, but gradually spoils digestion. Only we do not find bhang consumers suffer much for want of appetite. But this much is to be said, that there is always moral depravity in the case of charas and ganja, but not so much in the case of bhang. As for charas and ganja being the exciting cause of insanity, I know three or four cases; but in one case, I know there was no other predisposing cause also. But insanity is in these cases generally temporary; but, if not properly taken care of, it becomes permanent. Can't say whether the use of these drugs would bring on the return of insanity or not, as it has never been tried, and as for insanity causing a tendency to the use of the drug I know nothing.

15.—Mathra Das, Medical Practitioner.—*Number of witness*—49.

Q. 1.—I have for about forty years practised as a physician, and have frequently had under my treatment patients suffering from injuries caused by such intoxicant drugs.

I knew the antecedents of those patients, and am therefore acquainted with the good or bad effects of the drugs.

Q. 45.—The consumption of the drug, whether moderate or excessive, is productive of evil results—physical, intellectual, and moral.

It has on many an occasion come under observation that the bodies of charas-smokers, though stout and strong (originally) become gradually emaciated and lean notwithstanding their taking rich diet. Their complexion grows pale, as if no blood were left in the body, and they become feeble. It (charas) also impairs the intellect and affects the understanding.

The use of bhang does not alter the complexion of the face, but brings about all other consequences.

Unlike charas, bhang does not impair the appetite.

Diarrhœa is not induced by either bhang or charas.

Asthma and cough are caused by charas in consequence of its affecting the lungs.

Their use impairs the moral sense and leads to idleness and debauchery. Bhang impairs the intellect, and charas destroys it altogether and brings about insanity. Four persons have here become insane through the use of bhang, and three persons through charas. It does also cause a predisposition to insanity. One who becomes insane through the use of bhang is very timorous and is inoffensive to others. He fears lest some one should kill him. Such insane persons have been seen chattering about religious matters and are called *kutrah.* Those suffering from insanity induced by charas have been seen prating much and angrily, even using abusive language and causing trouble. They are styled *mania* (? maniacs). Insanity continues so long as the drug is used. The patient recovers in a few days after giving up the use of the drug. Insanity would be reinduced if the use of the drug were again resorted to.

During early stages, while they are yet in possession of their intellect, they confess their use of the drugs.

The drug has nothing to do with the diseases of the brain, but is most injurious, as noted already in the foregoing part (of this answer), in connection with its effect on the intellect.

In cases of sangrehni (a peculiar form of diarrhœa), indeed, its habitual use is beneficial.

16.—Pandit Mahadeo, Hakim.—*Number of witness*—50.

Q. 45.—Their long use weakens the system and produces dryness in the brain and body, and generally destroys the manhood of a person. The use of charas often creates cough and dama (asthma) and reduces the man's intellects. It often produces lunacy, and if its use be continued, this disease often becomes incurable.

17.—Hakim Salimulla, care of Alimulla, Native Physician and service.—*Number of witness*—51.

Q. 45.—(*b*) Charas, however moderately smoked, is immediately injurious to the power of discernment and to the internal organs.

It certainly improves the digestive power; *but produces* cowardice, *asthma and bronchitis.* After smoking it the consumer at once becomes passive. Although the intoxication of charas does not last so long as that of bhang does, yet it impairs the intellect, disturbs the mind, induces craziness, brings about sleeplessness, and produces headache and delirium. The consumer of this drug, though not discourageous, becomes coward. *It does not cause dysentery.*

Whatever benefit can be derived from the use of these two drugs depends upon good diet; otherwise the consumer of these drugs is sure to become subject to insanity or mania, the difference being that the consumers of charas are more liable to those diseases than those addicted to bhang.

I have treated several such patients who were cured completely, and in whom the symptoms were not re-induced until they again had recourse to bhang or charas.

I know nothing about ganja. I am convinced that the use of bhang or charas is not commenced by the consumers in connection with their mental anxiety or brain disease. On the contrary, the habit is originated in bad company, or in the society of fakirs, or for some religious purpose.

The Sikhs use bhang as a substitute for tobacco, which is religiously forbidden to them, and consequently they cannot smoke charas.

Mental or brain diseases are well known to the native physicians, who never prescribe bhang in their treatment of these diseases.

The medicinal use of bhang allowed by Hindi physicians is confined to the improvement of physical strength only.

Q. 46.—The habitual excessive use of these drugs produces noxious effects on the body.

It causes debility, shivering of limbs, weakness of nerves, delirium, insanity, anguish of mind, mania, cowardice, laziness, loss of appetite, and sexual power.

It deadens the intellect, injures digestion, blackens the blood and complexion, and weakens the retentive power. If the consumer is cured of the above symptoms, they are re-induced to some extent by the use of bhang as soon as restraint is removed, but not so much as in the case of charas.

18.—Pundit Janardhan, Baid, Hakim.—*Number of witness*—53.

Q. 1.—I have been practising as a baid for the last 34 years, and during this period I have had several opportunities of acquainting myself with the effects of these drugs.

Q. 42.—The use of almost all the intoxicants is injurious except when used medicinally.

Q. 45.—All *the mischief is done by charas and ganja.*

Q. 46.—The consumers of charas and ganja become lazy, remain in a dirty state, and pass their days like vagrants.

Q. 52.—Excessive use of charas and ganja is very bad and injurious.

19.—Shah Newaz, Hakim.—*Number of witness*—55.

Q. 1.—I have acquired my knowledge regarding the hemp drugs—bhang, ganja, charas—from my tutors and from Unanee medical works, and from my own observations.

Q. 45.—The following are the evil consequences of moderate habitual use of charas and bhang. The subject becomes proud and cruel; his eyesight becomes weak. There is melancholia, fear, and confusion of intellect. Its effects on the brain are insanity, hallucinations, evil thoughts, immoral thoughts, hatred of society of good men, irrelevant talking. Charas and bhang produce many injurious effects on body, for instance, impotency, dropsy, headache, windiness, flatulency of the belly, and mia and edima of the limbs and face, change of colour of the countenance, dropping off of the teeth, and general debility, which together impair digestion. Some persons get diarrhœa, cough, and asthma, and they become immoral also. In the commencement the consumer is led to debauchery. In my opinion insanity is the result, but the insanity is not permanent, but the symptoms are re-induced by use of the drug after liberation from restraint.

STATEMENT IV.—*Opinion of some witnesses on crime.* (*Para. 64 of the note.*)

Bengal (Crime).

1.—D. R. Lyall, Member of Board of Revenue.—*Number of witness*—1.

Q. 1.—I have been in the service of Government for nearly 32 years.

Q. 51.—My experience is that most bad characters consume ganja. I hold that in itself ganja does not dispose to crime; but it may strengthen the will to commit crime if it is already there. I do not know that the moderate use of ganja is connected with any particular form of crime.

Q. 52.—The above applies generally. Men under ganja sometimes commit murder; but it is hard to say how far the ganja is responsible.

Q. 53.—Generally premeditated. I have known cases of temporary homicidal frenzy.

Q. 51.—Oral The opinion given in this answer is largely based on opinions arrived at by Dr. Wise, who made experiments with the drugs when he was Civil Surgeon of Dacca. My meaning is that hemp would intensify a desire in a man's mind to commit a certain crime. Dr. Wise collected evidence from which he concluded that hemp strengthened a man's desires, criminal or other. I have tried to get Dr. Wise's notes, but am sorry I failed to do so. I can give no examples to illustrate my answers Nos. 52 and 53. They convey a general impression, and I cannot recall any individual case. It is a long time since I had to do with magisterial work.

1-B.—Mr. H. C. Williams, I.C.S.—*Number of witness*—13.

Q. 1.—I have been over twenty-two years in the service.

Q. 35.—I call this drug a curse to the country on account of what it does in the way of producing crime. It was not in connection with insanity, but mainly in connection with crime that I thus wrote.

2.—William Colebrooke Taylor, Special Deputy Collector, &c., &c.—*Number of witness*—36.

Q. 1.—About 47 years' residence in India, including 33 years as Assistant Commissioner, Deputy Magistrate, &c., spent chiefly in the mofussil, where I was in charge of subdivisions with management of Abkari or Excise matters since 1866 in Orissa.

Q. 51.—Yes; bad characters are usually ganja-smokers and takers of bhang. I cannot say what connection the moderate use of these drugs has with crime.

Q. 52.—Same as 51, but to greater extent.

Q. 53 & 54.—The numerous cases of what is called running amok which occur in India are often, if not always due to excessive doses of ganja and bhang taken with or without admixture of dhatura seeds (*dhatura stramonium*).

3.—Mr. G. E. Manisty, Collector of Saran.—*Number of witness*—19.

Q. 51.—Generally bad characters of low class people are addicted to it. Moderate use does not produce any crime.

Q. 52.—But when used in excess it leads men to commit crime.

Q. 53.—Excessive indulgence of ganja or bhang may incite to unpremeditated crime, violent or otherwise. I am not aware of any case in which it has led to temporary homicidal tendency.

4.—Mr. H. G. Cooke, Officiating Commissioner.—*Number of witness*—8.

Q. 1.—Nineteen years' actual residence, in which I have served in 21 districts in Lower Bengal.

Q. 52.—It is alleged that devotion to this habit leads men to steal in order to gratify the propensity. I do not think that it can be alleged that their excessive use can be associated with other forms of crime, except those of violence.

Q. 53.—Undoubtedly I believe I am right in saying that lunatic asylums are full of such cases.

Q. 54—It is not improbable that they may be used by rioters before a riot, but it would not be easy to prove this.

5.—Mr. C. Fasson, District Superintendent of Police.—*Number of witness*—87.

Q. 1.—As District Superintendent of Police of Bogra, in parts of which ganja is cultivated, in which also the wild bhang grows.

Q. 51.—Yes, a large proportion; but this is attributed, first, to debauchery and evil companionship resulting from the use of the drug; and, second, to the additional expenditure incurred in obtaining the nourishing food, which is a necessity to a ganja-smoker and which impells him to theft, &c.

6.—Mr. F. H. Tucker, Superintendent of Police.—*Number of witness*—88.

Q. 52.—Yes ; ganja makes a man irritable and headstrong, and leads the excessive smoker to any sort of rash doing.

Q. 53.—Yes, excessive indulgence in ganja incites a man to unpremeditated crime, the effects of rashness and violence of temper caused by smoking it.

7.—Rai Radha Govinda, Rai Sahib Bahadur.—*Number of witness*—166.

Q. 1.—Had had contact with persons who use the drugs.

Q. 53.—Excessive use of ganja incites unpremeditated crime.

8.—Maharaja Girija Nath Roy, Bahadur, Zamindar.—*Number of witness*—161.

Q. 51 & 52.—A large proportion of bad characters is either moderate or excessive consumers of these drugs. The consumption of these narcotic drugs has no direct connection with crimes of any general or specific character.

9.—Jogendra Nath Bandyopadhyay Vidyabhusan, M.A., Deputy Magistrate and Deputy Collector.—*Number of witness*—50.

Q. 1.—I have derived my experience as the Excise Deputy Collector of the District and as a general enquirer of the subject.

Q. 51.—A certain proportion of bad characters are habitual moderate consumers of these drugs, but the proportion is not very large.

Q. 52.—But the persons who are addicted to excessive use of any of these drugs are generally of bad characters.

Q. 53.—An excessive indulgence in any of these drugs leads to unpremeditated crime, violent or otherwise.

10.—Taraprosanna Roy, Chemical Examiner to the Government of Bengal.—*Number of witness*—116.

Q. 52.—The excessive use of the drugs is common among budmashes.

Q. 53.—People indulging in excessive use of ganja may become violent and commit crimes. They are sometimes affected with homicidal frenzy and run amok.

11.—Umagati Roy, B.L., and Secretary to the Jalpaiguri Branch, Indian Association.—*Number of witness*—232.

Q. 1.—The source of my information is partly based on my experience and partly on the information I have received from time to time from the persons concerned.

Q. 52.—The excessive use of ganja and bhang has connection with crimes relating to properties, human life, and public peace. The excessive smoker having exhausted his resources, and having yet a strong craving for the use of ganja, has to satisfy the same by means fair or foul, and he has, therefore, to secure money by theft, and he is likely to commit a breach of the peace and offences relating to human life when under the influence of the drug.

12.—Mr. E. H. C. Walsh, Officiating Collector.—*Number of witness*—27.

Q. 52.—Their excessive use, no doubt, leads to crime by producing a violent form of intoxication and by rendering the person for the time being not fully aware of the effects of what he is doing.

13.—K. G. Gupta, I.C.S., Excise Commissioner, Bengal,—*Number of witness*—17.

Q. 1.—During my 20 years' service I have worked in various parts of the Lower Bengal and Orissa, and as Sub-Divisional Officer and afterwards as District Officer had to administer excise in my jurisdiction.

Q. 52.—Occasional excessive use of ganja may lead to sudden outbursts of passion. Habitual excessive consumers have often irritable tempers.

14.—Mr. W. R. Ricketts, Manager, Nilgiri State.—*Number of witness*—92.

Q. 1.—First Excise Officer, then Manager of the Excise Administration in the Native State of Nilgiri for the last nine and a half years.

Q. 52.—Excessive consumption of both ganja and bhang leads in all probability to crime, the consumers not being responsible for their actions owing to the intoxicating effects. Usually crimes of a daring nature and those attended by violence are committed by ganja consumers.

Q. 53.—Yes; the slightest provocation would incite acts of violence wholly unpremeditated. I know of no case in which excessive indulgence in these drugs has led to temporary homicidal frenzy, but, of course, insanity caused by excessive consumption of ganja produces the disease, invariably attended with great violence.

15.—Mr. Rowley Lascelles Ward, District Superintendent of Police.—*Number of witness*—89.

Q. 1.—I have served in the Police Department for 14 years.

Q. 53.—Excessive indulgence in ganja does incite to violent crime. I know of a case where a smoker suddenly murdered a vendor because he would not supply him with more ganja.

Q. 54.—I have heard of ganja being used to fortify the courage of criminals about to commit premeditated acts of violence.

16.—Babu Nobin Chunder Sen, Sub-Divisional Officer.—*Number of witness*—39.

Q. 51.—No violent crimes, such as severe hurts and murders, are induced by excessive ganja smoking.

Q. 53.—It does. I know of one case where a murder was committed under the influence of too much ganja smoking by a fakir.

17.—Beprodas Banerjee, Newspaper Editor, and Chairman, Barasct Municipality.—*Number of witness*—217.

Q. 1.—I have known lots of hemp and charas smokers, have seen Hindu and Mussalman mendicants. Religious ascetics use ganja and sidhi, and have also seen ganja and sidhi used in temples.

Q. 51.—Budmashes avoid opium, lest while in jail they may suffer. But as a rule they are ganja-smokers. Dacoits and burglars invariably smoke ganja immediately before commencing operations.

18.—Rai Kamalapati Ghosal, Bahadur, Pensioner, Sub-Registrar and Landholder.—*Number of witness*—99.

Q. 1.—I was a police officer, and served both in the old and new police for more than 30 years.

Q. 51.—Many of the bad characters are habitual moderate consumers of ganja.

Q. 54.—Dacoits and robbers generally use ganja to fortify themselves to commit crimes with acts of violence.

19.—Nitya Nanda Roy, Merchant and Zamindar.—*Number of witness*—240.

Q. 51.—There are many wily bad characters, that use the drug moderately in order to retain their memory sharp, sense keen, eye clear, and ear acute for perpetrating crime with cunning, and at the same time use the drug only to give excitement to the action and to add extra amount of zeal and determination.

20.—Raja Protap Narain Singh, Deo Bahadur, C.I.E., Chief of Jashpur.—*Number of witness*—151 *

Q. 51.—Habitual consumers of these drugs are bad characters.

21.—Jagat Kishore Acharjea Chowdhuri.—*Number of witness*—179.

Q. 1.—Being a zamindar in Mymensing district, and having occasion of touring almost all over it, I had direct intercourse with every class of people, and had opportunity of acquiring personal experience about their habit of life and matters connected with the hemp drugs, in regard to which my answers are framed.

Q. 51.—I can say that most of the bad characters are ganja-smokers, and it is ganja that makes them impetuous and bold to perpetrate the foul actions they commit.

Q. 52.—I believe they grow up more fierce and turbulent by the excessive use of ganja.

22.—Hira Lall Banerji, Deputy Collector.—*Number of witness*—54.

Q. 1.—Experience gained during the course of my official career and personal experience.

Q. 51.—Generally rioters and bad characters are supposed to be ganja-smokers. From the facts recorded on the subject, it will appear that dacoits generally smoke ganja before the commission of the crime, in order to fortify themselves for the act. Most probably such people were not excessive consumers, as they had to act with considerable deliberation and skill.

*NOTE.—Not reported.

23.—Anango Mahan Naha, Judge's Court Pleader.—*Number of witness*—220.

Q. 51.—Yes, almost all the bad characters in any locality are habitual consumers of these drugs. Ganja-smokers are generally thieves.

24.—Kailas Chundra Dutta, M.A., B L., Vakeel, Judge's Court, Tipperah.—*Number of witness*—221.

Q. 52.—Yes; a large proportion of bad characters in the village are addicted to ganja-smoking.

Q. 53.—Yes, excessive indulgence leads to outbursts of temper, which cannot be controlled, and which may lead to perpetration of violent crimes.

25.—Mr. H. M. Weatherall, Manager, Nawab's Estate.—*Number of witness*—197.

Q. 1.—Served Government for 30 years, 20 of which as District Superintendent of Police, and 16 as Manager of large estates.

Q. 51.—Speaking as an old Police officer, I have invariably found thieves and bad characters addicted to smoking ganja; it is said to give them courage to undertake a job and cunning to escape capture.

Q. 53.—I know it tends to lunacy. I have seen several instances among criminal offenders.

26.—Surgeon-Lieutenant-Colonel A. Crombie, M.D., Surgeon Superintendent, General Hospital, Calcutta —*Number of witness*—104.

Q. 1.—Chiefly as Superintendent of the Dacca Lunatic Asylum for 7 years, and Member of Standing Committee for advising Government with regard to criminal lunatics.

Q. 51.—Much of the violent assaults and all the cases of "amok" that came under my notice in connection with insanity were committed by ganja-smokers. And most often as the result of a single excessive debauch, even in those accustomed to the moderate use of the drug.

Q. 53.—In these cases the crime was unpremeditated and the criminal subsequently appeared to be oblivious of the circumstances. I have known many cases of temporary homicidal frenzy produced in these ways.

27.—A. K. Ray, Sub-Divisional Magistrate, Bongong.—*Number of witness*—61.

Q. 1.—Have had knowledge of ganja-smokers from infancy.

Q. 53.—I know of 14 cases in which persons insane from excessive use of ganja committed unpremeditated violent attacks on women passing by.

28.—Babu Suresh Chundra Pall, Special Excise Deputy Collector, Howrah.—*Number of witness*—69.

Q. 1.—I have had opportunities of obtaining information on the subject as Collector.

Q. 51. A large proportion of bad characters use ganja. People who commit crimes harden themselves by the use of ganja.

Q. 54.—Yes, criminals who are addicted to ganja fortify themselves to commit a crime by taking ganja.

29.—Rai Bahadur Radha Ballav Chowdhuri, Honorary Magistrate, &c.—*Number of witness*—167

Q. 52.—Yes, a large proportion of bad characters are excessive consumers of ganja. The crime of theft generally is the special character of an excessive ganja-smoker.

30.—Bhuvan Mohan Sanyal, Government Pleader.—*Number of witness*—225.

Q. 51.—A good portion of bad characters are known as habitual moderate consumers of ganja.

I have often come across cases in my experience as a public prosecutor, in which the offenders were known to have used either ganja or alcohol before the commission of the offence.

Q. 53.—I believe an excessive indulgence in ganja incites to unpremeditated crime.

31.—C. R. Marindin, Magistrate and Collector.—*Number of witness*—16.

Q. 51.—A good many are said to be. It is a frequent piece of evidence in a bad livelihood case that the accused consumes ganja.

With crimes of violence.

Q. 53.—Yes; I have known cases where the consumption of the drug has led to temporary homicidal frenzy.

Q. 51.—The evidence is generally given. I think that the man is living beyond his means, and has to resort to theft to supplement his income.

32.—Abdus Samad, Deputy Magistrate and Deputy Collector.—*Number of witness*—55.

Q. 1.—I have been connected with excise administration since 1887.

Q. 51 & 52.—Nearly all clubmen, rioters, house-breakers, thieves, and dacoits, especially in Lower Bengal, are consumers of ganja in moderation or excess. They generally have a smoke of ganja before sallying forth on an expedition.

Petty thefts are often committed by poeple given to ganja-smoking, but having no means of satisfying the craving.

Q. 53.—Excessive indulgence in ganja is believed to incite to unpremeditated crime. I know of no case in which it has led to temporary homicidal frenzy.

33.—Mr. C. A. S. Bedford, Deputy Commissioner.—*Number of witness*—32.

Q. 51.—Petty thefts are committed by those who have been long addicted to the use of ganja, and whose intellectual faculties and moral sense are impaired. Violent crimes are also committed by those under the influence of the drug.

Q. 52.—In the acute stage riotings and murders occur.

34.—Mr. E. R. Henry, Inspector-General of Police, Bengal.—*Number of witness*—85.

Q. 1.—Experience of 21 years. Author of a Criminal Biography.

Q. 53.—As regards this question opinion is also divided. Some District Superintendents are inclined to believe that the excessive use of hemp drugs does lead to the commission of unpremeditated crime, while, on the other hand, several officers hold the contrary opinion. There seems, however, little doubt but that the excessive use of ganja makes a man irritable, and there are cases on record in which murders and murderous assaults have been committed under its influence.

In his oral statement the witness says that out of 1,408 bad characters 199 are addicted to the use of ganja and 16 are said to take bhang, and none are shown to take charas. It is evident from this that 14·1 per cent. are ganja-smokers among bad characters.

35.—Mr. W. H. Grimley, Commissioner of Chota Nagpore.—*Number of witness*—3.

Excessive use of ganja is believed to lead to crime. It brings a man into disrepute, and when once a man is known as a reprobate, the transition to crime is speedy. Excessive indulgence in ganja is said to incite to unpremeditated crime and to lead to temporary homicidal frenzy.

36.—Navin Krishna Banerjee, Deputy Magistrate and Deputy Collector.—*Number of witness*—42.

Q. 51.—Ganja-smoking hardens the sensibilities of the smoker.

Assam (Crime).

37.—Mr. R. S. Greenshields, Deputy Commissioner.—*Number of witness*—6.

Q. 51.—In this neighbourhood the Assamese proper are as a rule non-consumers of ganja. The ganja consumers are generally foreigners, and as a rule belong to the very lowest grades amongst such foreigners, and, as might be expected from their social position, they do furnish a considerable proportion of the bad characters of the neighbourhood.

52. I have known crimes of violence to be committed on little or no provocation by persons labouring under the peculiar delirium produced by a long continued course of ganja. In fact, people in this condition are in my opinion particularly dangerous, being extremely easily provoked to commit crimes of violence.

53. Yes, most undoubtedly. Persons labouring under peculiar delirium produced by the excessive use of ganja are particularly liable to commit manslaughter on little or no provocation. I have known more than one such case.

38.—Dr. J. W. Macnamara, M.D., Civil Surgeon.—*Number of witness*—20.

Q. 1.—I have for 13 years been among people who make use of hemp products to greater or less degree.

Q. 51.—A very large proportion of the prisoners in our jail at Tezpur have been addicted to the use of these drugs in some shape. Of 239 male prisoners, 15 consumed ganja. Crime, it would appear, goes with the use of these drugs. I can't ascertain whether ganja consumers are addicted to any special crime.

Q. 53.—Yes. It leads to homicidal mania. A case occurred in the Tezpur Lunatic Asylum in which one of the lunatics who was believed to have become insane from smoking ganja killed the compounder in a fit of excitement. He smoked 5 annas' worth daily.

39.—Mr. J D. Anderson, Officiating Commissioner of Excise.—*Number of witness*—4.

Q. 1.—I have been in charge of the excise administration of nearly every district in Assam, and am at present officiating as Commissioner of Excise.

Q. 51.—The only habitual criminals in the province are the Mussalman river dacoits of Sylhet, and foreigners of bad character in other districts. All, or nearly all, of these consume ganja habitually and to excess.

Q. 53.—I have known of cases in which the immoderate use of ganja among tea garden coolies has brought about insane and unreasonable jealousy resulting in crimes of violence.

40.—Mr. J. H. W. Dalrymple-Clark, District Superintendent of Police.—*Number of witness*—14.

Q. 1.—Twenty years' service in India.

Q. 52.—Ganja is the drug almost invariably used by real bad characters, and is generally used by such in excess when about to commit heinous crime and crime with violence. Bad characters habitually use it to excess in order to give themselves Dutch courage. The excessive use of ganja more often than not leads to crime amongst the lower classes.

41.—Laksmi Kanta Barkagati, Secretary to the Tezpur Ryots' Association—*Number of witness*—46.

Q. 1.—I had ample opportunities of visiting different places of this district and frequently in contact with persons addicted to use narcotics.

Q. 53.—Excessive indulgence in ganja-smoking incites unpremeditated crime, such as assaults and murder.

Ganja gives rise to murder and assaults. The ganja-taker becomes suddenly excited and does these things I have seen assaults two or three times in this town by people whom I know to be ganja-smokers. When I was Steamer Agent at Birnath, the Doms, my neighbours, used to quarrel under the influence of ganja, and we had to drive them off. The facts that such assaults and other offences arise from ganja does not come out in trials, because the people do not plead that they have taken the drug. They prefer to say that they never committed the offences at all.

42.—Mr. J. Rivett-Carnac, District Superintendent of Police.—*Number of witness*—15.

Q. 53.—I have a distinct impression that excessive indulgence in ganja does incite to unpremeditated violent crime. I cannot call to mind at present any particular instance of this, but I am pretty certain that I have met with several cases in the course of my 16 odd years' experience as a Police officer.

43.—Mr. F. C. Moran, Tea Planter.—*Number of witness*—33.

Q. 53.—Yes; murder. I had a case of a man in my garden who cut off his wife's head whilst temporarily insane under the effects of the drug.

44.—Mr. P. H. O'Brien, Deputy Commissioner.—*Number of witness*—7.

Q. 53.—I recollect a case of a murderous assault being committed by a person under the influence of ganja, but I cannot give particulars. I presume that excessive indulgence in these drugs does incite to unpremeditated crime, inasmuch as they appear to produce mania under such conditions.

45.—Kishen Chandra Chattopadhya.—*Number of witness*—40.

Q. 1.—Have had to deal with many consumers and dealers of the drugs and personally have seen the consumption.

Q. 53.—I know of a case in which an excessive ganja-smoker killed a friend of his with a *lathi* without any apparent cause for such action.

North-Western Provinces (Crime).

46.—Munshi Raj Kishore, Pleader.—*Number of witness* —234.

Q. 51.—Yes, thieves are habitual consumers, and the use of these drugs is often the motive of thefts.

Q. 52.—Necessity has no law. The more want for money for these drugs, the more thefts to defray its expenses.

47.—E. Berrill, Deputy Inspector-General of Police.—*Number of witness*—65.

Q. 51 and 53.—A fairly large proportion of the lower class of Hindu bad characters are moderate consumers of the drugs, but such consumption has no connection with crime. Excessive indulgence in ganja has been known to incite to unpremeditated violent crime. Unfortunately I am not able to recall any particular case.

48.—Mr. E. R. Parsons, District Superintendent of Police.—*Number of witness*—70.

Q. 51 and 52.—The percentage (of bad characters) is not more than 15. The excessive use of either ganja or charas affects the mind, and instances have been known of men so affected committing crime.

49.—Mr. A. W. Cruickshank, Magistrate.—*Number of witness*—5.

Q. 52.—Ganja used in excess is particularly likely to produce utterly reasonless violence and even homicidal mania.

50.—M. Mahomed Wasi, Deputy Collector.—*Number of witness*—44.

Q. 51.—There are a large proportion of bad characters habitual moderate consumers of ganja and charas, with the exception of Sadhus, Bairagis, and persons belonging to the labouring classes.

The moderate use has connection with crime in general and often with crime of any special character. It has been noticed that these bad characters administer drugs to travellers with the pretext of its being tobacco, and when the travellers become senseless, the bad characters make away with their property.

Q. 52.—The more is the excessive use of the drugs, the more is the number of crime

Q. 53.—Premeditation is necessary for the committal of heinous offences.

Intoxication will nevertheless incite to the committal of crime.

51.—Mr. H. Fraser, Magistrate, Bijnour.—*Number of witness*—8.

Q. 53.—I believe it does. In my experience as a Magistrate I have had many cases before me in which acts, chiefly of violence, but also acts such as thefts and burglaries, were committed under the influence of ganja. I cannot give figures, but I may have had 20 or 30 such cases come before me in the eastern districts of Gorakhpur and Benares. I cannot remember any particular case of temporary homicidal frenzy, but I believe that excessive use of ganja does sometimes lead to homicidal frenzy.

Q. 36. Oral.—I have never seen a native of the middle class ruined by liquor On the other hand, I have seen some criminal lunatics whose condition was attributed to ganja, charas, and bhang. Men have actually appeared before me who seemed to be still under the influence of the drug.

Q. 53. Oral.—I noticed that when a man stated he had done an act under the influence of ganja, he was frequently corroborated by the witnesses. On the other hand, when alcohol was alleged by the prisoner, the evidence did not support him.

52.—Mr. C. F. Knyvett, District Superintendent of Police.—*Number of witness*—68.

Q. 53.—Excessive indulgence in either of these three drugs sometimes leads to quarrel and assaults.

53.—Mr. B. Hamilton, District Superintendent of Police.—*Number of witness*—73.

Q. 51.—In the city badmashes generally make use of these drugs.

54.—Syed Habibullah, Joint Magistrate.—*Number of witness*—25.

Q. 54.—Ganja and charas are invariably used by dacoits before they commit dacoities. These drugs make them more active and enable them to walk long distances.

55.—Khan Bahadur Syed Ali Husen, Revenue Member, Rampur Council of Regency. —*Number of witness*—35.

Q. 52.—The excessive use of these drugs is the habit of the depraved and immoral. It promotes crime.

56.—Mr. L. H. L. Thomas, District Superintendent of Police.—*Number of witness*—69.

Q 53.—It is believed as a matter of course excessive indulgence does incite to unpremeditated crime of all kinds. It promotes poverty and despair and all the result of a debased life which naturally must lead to criminal end.

57.—Dr. Manohar Pershad Tewari, Practitioner in Medicine and Surgery.—*Number of witness*—130.

Q. 51.—Most of the bad characters are habitual moderate consumers of any of these drugs. Charas and ganja are expensive things to be used for the poor people; and when they cannot afford to bear these heavy expenses, they become inclined to gamble, and when they fail in this they commit robbery and theft, etc.

Q. 53.—Yes, excessive indulgence in any of them causes unpremeditated crime, violent or otherwise. I know many in which it has led to temporary homicidal frenzy.

Yes, criminals generally who are addicted to any of these drugs fortify themselves by using it before committing a premeditated act of violence or other crime, but not otherwise.

58.—Mr. H. O. W. Robarts, Joint Magistrate and Excise Officer.—*Number of witness*—32.

Q. 53.—I have met with one case in which a police constable, under the influence of bhang, threw small stones at his comrades who were drilling and sat at the door of his quarters with his rifle, threatening to shoot any one who tried to take it from him. The rifle was, however, got away from him without difficulty or accident.

59.—Mr. W. R. Partridge, I.C.S., Deputy Commissioner.—*Number of witness*—20.

Q. 1.—I have been ten years in the Civil Service in the North-Western Provinces and Oudh, and have held charge of the Excise Department in three districts—Gorakhpur, Benares, and Garhwal.

Q. 52.—To the excessive use of ganja and charas many crimes of violence are probably ascribable.

Q. 53.—Yes, in Srinagar (Garhwal) some 8 or 10 years ago a fakir who consumed charas in considerable quantities took a boy and deliberately chopped off his head. When kept out of the way of any hemp drugs this man seems to behave fairly like a rational being; but whenever he gets charas, he gets violent and dangerous.

60.—Kedar Singh, Pensioned Subadar, Regiment No. 36.—*Number of witness*—262.

Q. 51.—Large proportion of bad characters are habitual moderate consumers of these drugs, and they commit both general and special crimes.

Q. 53.—The excessive use of these drugs sometimes incites to crime.

Q. 54.—The criminals use these drugs to fortify themselves to commit a premeditated act of violence and other crime.

61.—M. Zain-ul-Abdin, Khan Bahadur, Deputy Collector.—*Number of witness*—39.

The witness has had varied experience of many years.

Q. 51.—Though there is no large proportion of bad characters among habitual moderate consumers, but still they are mischievous, and the common crimes are committed because they are always in need of money to buy drugs for consumption.

62.—Ali Mahomed Khan, Pensioner.—*Number of witness*—264.

Q. 1.—I was in company with those smoking charas, etc.

Q 51.—Bad characters use bhang, charas, and ganja generally, and their resources are generally limited. They invent many ways to procure money by illegal means when their income fails them. In this way crimes are increased.

Q. 53 —By excessive use a man loses his sense of right and wrong. In a state of intoxication they plan out and commit different crimes which they hate when sober. They do not remember anything done by them. It is often heard that murders have been committed in such a state. Hurt and grievous hurt are small matters for these people.

Q. 54.—Thieves and other bad characters use them. They plan out some device, and by this intoxication they fix their attention to it exclusively.

63.—Kasim Hasan Khan, Tahsildar.—*Number of witness*—58.

Q. 51.—Generally rogues and vagrants use them in assemblies. Such bad characters often plan criminal designs in such a condition.

Q. 54.—Criminals use them to acquire temporary courage to commit a premeditated act of violence or other crime.

64.—Mr. B. Rodgers, Assistant Commissioner.—*Number of witness*—24.

Q. 1.—I have been Excise Officer in Hamirpur, Meerut district, and for a short time in this district.

Q. 52.—Intoxication from these drugs, and more especially from ganja, raises a man to a high pitch of excitement; at times leads him to commit violent crimes that he would shrink from committing in his saner moments.

Q. 53.—Unpremeditated crimes are often committed by men while under the influence of these drugs; but such crimes are generally of the nature of revenge for some slight or injury.

65.—Mr. T. Stoker, I.C.S., Excise Commissioner.—*Number of witness*—6.

Q. 1.—I was twelve years an Assistant Magistrate and Joint Magistrate and Collector, and constantly in charge of the district excise. I was three and a half years in settlement work. I have been two years in charge of the Excise Department.

In regard to crime, my belief and experience as a Magistrate and Excise Officer is that the use of hemp drugs is not a direct cause of crime. In cases where persons are going to commit a crime of violence already arranged and determined, I believe they undoubtedly use hemp drugs, as they might any other stimulant, to fortify themselves. I have known such cases. I remember catching dacoits red-handed who were said to have used hemp drugs. They were all in their senses. I think, too, that, as in the case of alcohol in England, a man might go much further in crime under the influence of drugs than he would have done had he not been excited by their use. But such effects of the drug have never come before me.

66.—Hon'ble A. Cadell.—*Number of witness*—1.

Q. 1—I am Member of the Board of Revenue in charge of Excise and Member of the Provincial Council.

The consumption of charas and ganja is looked upon as a more or less disreputable practice. It is natural then that the proportion of bad characters who use these drugs should be large. That is the only connection I see between them and crime.

67.—Mr. F. Porter, Inspector-General of Police.—*Number of witness*—64.

Q. 1.—I have twenty-eight years' service in the Civil Service in this Province and a little over two years as Inspector-General.

Q. 51.—The only connection between these drugs and crime that I know of is that when a man has made up his mind to a crime and has not the pluck to do it, he takes the drug to give him Dutch courage.

Q. 54.—I think very few men in the Police force use these drugs. We do not in the first place put in men who are habitual users. My opinion is that the habitual use unfits a man for being a policeman.

Punjab (Crime).

68.—Behram Khan, Zemindar and Honorary Magistrate.—*Number of witness*—61.

Q. 53.—The use of charas or bhang makes the consumer frantic and leads him to commit a violent and unpremeditated crime. Here is an instance. Two years ago a person of the Khosa tribe, while under the influence of bhang, murdered one of his tribesmen in the Khosa ilaka in this district.

69.—Mr. Alexander Anderson, Deputy Commissioner.—*Number of witness*—10.

Q. 1.—I have served in the Punjab since November 1872 as Assistant Commissioner, Settlement Officer, and Deputy Commissioner.

Q. 52.—The excessive use of charas is said to lead to crimes of violence. The belief is general and, I believe, well founded.

Q. 53.—Crimes of violence and the excessive use of charas are associated together. The records of the lunatic asylums will give numerous cases where charas smokers have run amok.

70.—Sheikh Riaz Hussain, Zemindar.—*Number of witness*—67.

Q. 51.—Some bad characters commit crimes by means of these drugs, generally offences under sections 377 and 379 of the Indian Penal Code, and in some instances the criminals stupefy their victims by administering these drugs in furtherance of their criminal designs.

Q. 52.—Crimes are committed by inducing the excessive use of these drugs, and by means of these serious and minor offences are committed.

Q. 53.—Certainly indulgence in charas incites to unpremeditated crime, violent or otherwise, but I can give no instance.

Sardar Balwant Singh, Extra Assistant Commissioner, Jagirdar, Government servant. —*Number of witness*—38.

Q. 51. A large proportion of bad characters are habitual moderate consumers of charas.

71.—Arjan Singh, Extra Assistant Commissioner.—*Number of witness*—19.

Q. 1.—I was Excise Officer at Umballa, Rohtak, and Dera Ghazi Khan for several years. At present I am engaged in the Dera Ghazi Khan Settlement as Extra Assistant Settlement Officer.

Q. 51.—I have had charas-smokers before me as Magistrate. They were vicious persons of bad character, from whom I had to take security. They took both charas and chandu.

72.—Major-General M. Millet, Retired List.—*Number of witness*—69.

Q. 51.—Yes, most professional bad characters use these drugs.

Q. 52.—Yes. As No. 51.

Rape, unnatural crime.

Deeds of violence.

Q. 53.—The ganja-smoker lives in the border land of homicidal mania. Numerous cases. See also criminal records. See also "Revelations of an Orderly" written by a country-born Magistrate of great experience (Benares, Medical Hall Press, republished 1866). This book was described by an inexperienced European Magistrate some thirty years ago as a gross exaggeration, but it is below, not above, reality.

73.—Mulraj, Extra Judicial Assistant Commissioner.—*Number of witness*—15.

Q. 51.—Bad characters generally use these drugs.

73-B.—Pundit Janardhan Baid, Hakim.—*Number of witness*—94.

Q. 1.—I have been practising as a baid for the last 34 years, and during this period I have had several opportunities of acquainting myself with the effects of these drugs.

Q. 51.—Charas is commonly smoked by bad characters.

Q. 52.—Excessive use of charas and ganja is very bad and injurious.

74.—Surgeon-Major T. E. L. Bate, Inspector-General of Prisons.—*Number of witness*—32.

Q. 51.—A large proportion of the prisoners in our jails are consumers of intoxicating drugs of one kind or another.

The use of these drugs begets lazy habits, which may sooner or later lead to crime.

75.—Mr. R. Sale Bruere, District Superintendent of Police.—*Number of witness*—31.

Q. 1.—I have been now in Government service for the last thirty-two years.

Q. 51.—Moderate consumers, when they are in poor circumstances, are inclined to commit petty crimes in cities and towns to obtain money to purchase these drugs. They are also quarrelsome, and their bad tempers, when under the influence of drugs, get them into trouble.

Q. 53.—Persons, when addicted to the excessive indulgence of these drugs become temporarily insane, and when in this state commit offences of a grave nature, as they are extremely irritable and easily take offence at everything, and have been known to commit murder, suicide, &c., when in this intoxicated state.

76—Bedi Sujan Singh, Rais and Honorary Magistrate.—*Number of witness*—57.

Q. 53.—Ganja and charas consumers are often quarrelsome.

77.—Colonel Hutchinson.—*Number of witness*—4.

I have been thirty-one years in India and twenty-six years in the Punjab Commission, chiefly in Jhelum, Multan, Gurdaspur, Lahore, and Simla. I am now Commissioner of Lahore.

In regard to the connection of the drugs with crime, I have known cases of men running "amok" who, I was informed at the time, were under the influence of the drug.

None of them came before me officially, but I have heard of such cases. And I remember one case in which a Gurkha belonging to the regiment to which I was then attached ran "amok" and killed or cut down some four or five people in the bazar.

78.—Mr. J. P. Warburton.—*Number of witness*—30.

I have known of some cases where a man having taken charas or bhang to excess went off and committed motiveless crime, such as running amok. I know that there have been such cases as murders or violent crimes being committed without motive under the influence of these drugs. But the cases are so few and far between that it would be difficult to find them.

Central Provinces (Crime).

79.—Colonel H. Hughes Hallett, Officiating Inspector-General of Police and Prisons.—*Number of witness*—29.

Q. 1.—General observation during a residence of 35 years.

Q. 51.—Yes. Nearly all bad characters are consumers to a greater or less degree. The dissolute habits engendered by its use lead to crime against property.

Q. 53.—Yes, I think so. Running *amok* is, I should say, always the result of excessive indulgence.

Q. 51.—*Oral.*—In jails a large number of casuals might not be found to be consumers; but I think that if you got at the truth you would find 50 per cent. of the habituals to be consumers. I should say that over a whole jail, like the Jubbulpore Jail, the average would be over 25 per cent. I think that all habituals, as now defined, are not bad characters properly so called. Therefore I conclude that more than 50 per cent. of bad characters are consumers. The excessive consumer is a dissolute person, who will not work. Therefore he has a tendency to commit offences against property when he runs out of cash. This does not refer to the moderate use. I cannot refer to cases, but I fancy every Magistrate has had such cases.

80.—Pundit Dina Nath, Rai Bahadur, Assistant District Superintendent of Police.—*Number of witness*—32.

Q. 51.—A large proportion of bad characters, habitual, are moderate consumers of ganja; such persons commit petty thefts and simple hurt cases.

The rule holds equally in the case of opium-smoking and liquor-imbibing. I was under the impression that I must confine my reply to ganja-smoking alone. The connection, in my opinion, between ganja and crime is that of cause and effect.

Habitual bad characters are generally idle men who do no work or can get no work; and as they have contracted the habit of smoking ganja and opium and drinking liquor, they do not feel up to work, but as they must more or less have these drugs, they are necessitated to commit petty thefts.

Q. 52.—The use of the intoxicating drugs obtained from hemp to excess tends to make the consumers more violent, and violent crimes are often committed by such men.

Q. 54.—Yes, criminals make use of such drugs and to give them false courage when they wish to commit violent crime.

81.—Mr. Fred A. Naylor, District Superintendent of Police.—*Number of witness*—30.

Q. 51.—In towns especially, I think, a large proportion of the bad characters are moderate consumers of hemp drugs. In the district the proportion of moderate consumers is smaller than in towns. These drugs are generally made use of by gamblers. Whether the drugs lead to the gambling or the gambling to the drugs I am not prepared to say, but that there is a connection between drugs and the criminals through the channel of gambling there is no doubt. When the gambler is short of funds he takes to stealing.

Q. 52.—The excessive use of these drugs leads to the commission of crime of a more serious nature.

Q. 53.—An excessive use of hemp products, specially ganja, often leads to unpremeditated violent crime. It also causes the death of the consumers who, when the system is

saturated to a certain extent, sometimes drop dead after taking a long pull. I know of several instances in which it has led to temporary homicidal frenzy. Such is not the case with the excessive use of opium.

Q. 51.—Yes, often. It is notorious that Gazees bhang themselves when they wish to fight or to run *amok.*

82.—The Hon'ble Gangadhar Rao Madhav Chitnavis, Honorary Magistrate, Member of the Viceroy's Council.—*Number of witness*—46.

Q. 51-52.—I have not been able to trace the connection of crime solely to the consumption of this drug. But as bad characters generally belong to the lower classes, and as these classes of persons are very generally addicted to this vice, it generally appears that most of the bad characters are given to smoking ganja. As an Honorary Magistrate I find that the criminals who come before me are generally given to this sort of vice.

Of course the persons using this drug in excessive quantities are persons who are given to thefts and other offences.

Q. 51.—*Oral.*—By criminals I mean thieves and such persons, not those charged with assault. I should expect 60 per cent of thieves, robbers, etc., in jail to be ganja-smokers; one-fourth of the whole jail population probably.

83.—Trimbak Rao Sathe, Commissioner and Diwan of the Sonepur State.—*Number of witness*—13.

Q. 53.—The excessive indulgence in ganja-smoking incites to unpremeditated violent crime. Recently I saw a case of a man who went mad owing to excessive ganja-smoking, and in that state of his mind he killed his own uncle who had remained to watch him. There was no ill feeling between them. There was no motive for the murder except, perhaps, that the uncle did not allow him the use of ganja.

Q. 53.—*Oral.*—By homicidal frenzy I understand a desire to kill a man, no matter who it might be.

84.—Syed Mohamed Husan, Extra Assistant Commissioner and Diwan, Khairagarh State.—*Number of witness*—15.

Q. 51.—The bad characters generally use these drugs in order to prepare themselves for some deed of violence, such as house-breaking, robbery, and dacoity.

Q. 52.—An excessive consumer is too much intoxicated to do any act of violence. The indulgence in these drugs weakens constitution and thus renders the consumer quite unfit for any deed of violence. I have come across cases in which the Police have made a criminal confess his crime by making him smoke ganja excessively.

Q. 53.—Yes, the excessive indulgence in these drugs, especially in ganja, incites to unpremeditated violent crimes, such as homicide, grievous hurt, and suicide.

85.—Mr. Pasley, Inspector of Police and Superintendent of City Police, Jubbulpore.—*Number of witness*—34.

Q. 51.—I do not think that more than 20 per cent. of the bad characters of this city are moderate smokers of these drugs. These ganja-smokers commit petty thefts only.

Q. 52.—About 10 per cent. of the bad characters of this city are excessive ganja-smokers, they are not addicted to any special class of crime, but commit petty thefts like the others when driven to it for want of funds to obtain the drug.

Q. 53.—The excessive use of this drug incites bad characters to quarrel with people and ultimately to fight. Byragees and sadhus are much addicted to the use of these drugs, and I have known an instance in which one sadhu, when excited under the excessive indulgence of ganja, killed a fellow-sadhu.

Madras (Crime).

86.—Colonel G. Chrystie, Deputy Inspector-General of Police.—*Number of witness*—65.

Q. 51.—The lowest class of Muhammadans, among whom there are a good many bad characters, consume ganja and bhang prepared from it. Korchera or Yerikallas and Lambadies or Sugallies are said also to consume it largely. These tribes often commit crime.

87.—Captain C. M. Kennedy, Commandant, 1st Pioneers.—*Number of witness*—81.

Q. 51.—Those who consume them are generally, from a military point of view, worthless characters.

Q. 53.—Yes; particularly ganja.

In nearly every case of murder, by shooting, etc., which has occurred of recent years, the perpetrator has been a known ganja or charas eater.

88.—Mr. E. H. Gadsden, Superintendent, Central Jail.—*Number of witness—73.*

Q. 51.—Fifty per cent. of re-convicted prisoners now in jail use ganja when at liberty.

89.—H. E. G. Mills, Superintendent, Central Jail.—*Number of witness*—74.

Q. 51.—All fakirs and wanderers from place to place and those who are habitual gamblers with no permanent mode of living resort to ganja-smoking; for want of the drug, whether moderate or excessive, leads to crime.

90.—Mr. I. Tyrrell, Superintendent, Central Jail.—*Number of witness*—71.

I have been employed as a jail official for more than 26 years, and can remember at different times during that period assaults made on jail officials, jail servants, and fellow-convicts by prisoners who were at the time when committing the assaults under the influence of ganja.

I should certainly say, from the number of men I have seen under its influence, that the drug stimulates the passions of some men and makes others utterly reckless, caring but little, when under its influence, what crimes they commit.

91.—K. Narainaswamy, R. B., Inspector of Police.—*Number of witness*—69.

Q. 1.—I have been 17 years in the Police Department and three years in other departments.

Q. 51.—Yes, out of 21 on the active list of criminals in the Vizianagram town, 15 are habitual ganja-smokers and opium-eaters or smokers. These men commit thefts and house-breakings, though not of a serious nature.

Q. 53.—I have known of cases in which the excessive use of ganja-smoking has made the consumers mad; but I know no case in which it led to homicidal frenzy. (Q. 53.) By mad I mean only leaving worldly concerns and leaving home and going about.

92.—Sri Vasudeva Rajamani Rajah Deo, Zamindar of Mandasa.—*Number of witness*—128.

Q. 1.—I am answering the questions from my local experience and the knowledge in medical books.

Q. 51.—It seems that ganja increases the bad characters of the habitual consumers, who practise it or use it once a day, and hence show their violence.

Q. 53.—Ganja, when taken excessively, excites a consumer to commit any kind of violence. About 23 years ago there was a consumer named Padmanapha Marvary, who actually tried to stab one Dasarathi Charu Patnaik with the cruel intention of murdering him.

93.—Mr. K. C. Manavedan Raja, Collector.—*Number of witness*—19.

Q. 53.—May; it is not unlikely that the indulgence may occasionally induce violent and other crimes.

An instance is quoted locally wherein a person who indulged in the drug beat a person, resulting in death, on slight provocation.

Bombay (Crime).

94.—Narain Rao-Bhikhaji Jogalekar, pensioned Deputy Collector of Government and now Karbhari of the Aundh State.—*Number of witness*—36.

Q. 1.—Experience of nearly 20 years.

Q. 53.—The accused in many cases charged for culpable homicide not amounting to murder, or causing the death of other persons by rash or negligent acts, have many times pleaded before me that they did the act while in a state of ganja or liquor intoxication.

95.—H. Kennedy, District Superintendent of Police.—*Number of witness*—54.

Q. 51.—It is generally found that bad characters are either habitual or moderate consumers of bhang and ganja. Taken as bad characters are from the lower orders, who are the most likely to indulge in these drugs, this is only natural. The moderate use of the drugs leads to abusive and quarrelsome conduct.

Q. 52.—A moderate but habitual consumer would, if he were to indulge to excess, probably rave and become excited and would be ready to commit any crime of violence that first came into his head.

Q. 53.—I do know of a case in which a sepoy of a Baluch regiment, when under the influence of ganja or bhang—I forget which it was—ran amok and shot at any one he came across, killing and wounding various persons.

96.—Mr. P. H. Dastur, Presidency Magistrate.—*Number of witness*—20.

Q. 52.—But the excessive use of ganja and charas may lead to crime, for those addicted to these drugs remain constantly under a stupour and are unable to follow any honest calling and must necessarily resort to crime.

Q. 53.—I am informed that excessive indulgence in charas makes a man violent in his temper and leads him to commit offences attended with violence. The Pathans in Bombay are well known as a turbulent class and they are mostly habitual consumers of charas. I had lately a case before me in which a Marwari goldsmith, under the influence of charas, attacked a bailiff with a pair of tongs and behaved very excitedly in court. I am not aware of any case in which the habit has led to temporary homicidal frenzy.

97.—Mr. Nanabhoy Cowasji, City Police Inspector.—*Number of witness*—60.

Q. 1.—I had opportunities for several years of coming into contact with such persons when I was in Kathiawar. Some of them consumed ganja and bhang in excessive, and some in moderate quantities.

Q. 52.—However, in one case to my knowledge it so occurred that in November 1885 in Broach certain Talavias, having gathered together one morning and after ganja, committed a riot in that town, in which the Superintendent of Police, Mr. Prescott, was killed. Further particulars, if required, may be obtained from Broach.

98.—Mr. C. G. Dodgson, I.C.S., 1st class Magistrate and Assistant Collector.—*Number of witness*—17.

Q. 51.—Bad characters in so far that they are often persons with no fixed homes or no regular means of employment—are frequently habitual moderate consumers of ganja. In my experience the use of the drug has no other connection with crime.

Q. 53.—Excessive indulgence in any of these drugs or other preparations is apt to lead to unpremeditated crime.

99.—Mr. J. M. Campbell, C.I.E.—*Number of witness*—9.

I have 24 years' service in all divisions of the presidency (except Sind).

I believe that in ordinary magisterial work there is no connection between hemp drugs and crime. But there are certain crimes, murders, and crimes of violence, ascribed to ganja; and there are also certain statements regarding the use of the drugs by Rajputs that point to its leading to violence. I have never sifted these statements, nor have such facts come to my notice. On the other hand, I have been told that the drugs make a man timid.

Sind (Crime).

100.—Dr. S. M. Kaka, M.R.C.S., L.R.C.P., D.P.H., &c.—*Number of witness*—24.

Q. 1.—As a medical practitioner of 11 years' standing and as medical officer of health I have had some opportunities of becoming acquainted with hemp drugs and their effects, especially in Karachi.

Q. 51.—The habitual moderate consumers, chiefly of charas, are bad characters—loafers, vagabonds, thieves, shop-lifters, &c.

101.—Mr. C. E. S. Stafford Steele, Officiating Deputy Commissioner—*Number of witness*—3.

Q. 52.—Persons claiming to be addicted to ganja and charas have been known to plead irresponsibility for their actions.

Q. 53.—It appears that those who indulge in bhang are easily provoked and become excessively irritable, and that insanity results from the immoderate use of ganja and charas. Serious crimes are most undoubtedly committed by persons addicted to these drugs, mostly ascribed either to provocation or frenzy.

102.—Khan Bahadur Kadir Dad Khan Gul Khan, C.I.E., Deputy Collector.—*Number of witness*—4.

Q. 1.—I have served in all the districts of the province for a little more than 34 years, and have had to deal with those who sell and consume hemp.

Q. 53.—The excessive indulgence in these drugs does incite to unpremeditated crime of violence.

STATEMENT V.—*List of witnesses who say there will be no political danger.* (*Para. 86 of the note.*)

Serial No.	Province.	Name and Rank.	Number of witness.
1	Bengal ...	Ganendra Nath Pal, Sub-Divisional Officer	46
2	Do. ...	H P. Wylly, Government Agent	91
3	Do. ...	W. C. Taylor, Special Deputy Collector, Land Acquisition, East Coast Railway, and pensioned Deputy Magistrate and Deputy Collector	36
4	Do. ...	H G. Cooke, Officiating Commissioner	8
5	Do. ...	C. Fasson District Superintendent of Police	87
6	Do. ...	F. H. Tucker, District Superintendent of Police	88
7	Do. ...	A. C. Tute, Collector	12
8	Do. ...	J. C. Price, Magistrate and Collector	9
9	Do. ...	Mahendra Chandra Mitra, Pleader and Municipal Chairman ..	209
10	Do. ...	A. E. Harward Officiating Magistrate and Collector ...	30
11	Do. ...	Jadub Chandra Chuckerbutty, Civil and Sessions Judge ...	94
12	Do. ...	Gopal Chunder Mukerji, Sub-Divisional Officer	41
13	Do. ...	J. Kennedy, District Magistrate	20
14	Do. ...	J. H Bernard, Officiating Collector	29
15	Do. ...	Nanda Krishna Bose, Statutory Civil Service, Acting Magistrate and Collector	25
16	Do. ...	R. L Ward, District Superintendent of Police	89
17	Do. ...	Nobin Chunder Sen, Sub-Divisional Officer	39
18	Do. ...	Hon'ble F. R. S Collier, Collector	15
19	Do. ...	F. H Barrow, Collector	10
20	Do. ...	L. P. Shirres, Collector	26
21	Do. ...	Mathura Mohan Sirkar, Inspector of Police	90
22	Do. ...	Colonel Garbet, Deputy Commissioner	31
23	Do. ...	W. H. Grimley, Commissioner	3
24	Do. ...	Raja Peary Mohan Mookarji, Zamindar	160
25	Do. ...	Rai Radha Govind Rai, Sahib Bahadur, Zamindar... ...	166
26	Do.	Babu Rajkumar Sarvadhikari, Secretary	231
27	Do. ...	Umagati Ray, Pleader and Secretary to the Jalpaiguri Branch, Indian Association	232
28	Do. ...	Pyari Shankar Das Gupta, Medical Practitioner, Secretary, Bogra Medical Society	134
29	Do. ...	Akshay Kumar Maitra, Pleader, Secretary, Rajshahi Association	233
30	Do. ...	A. F. M. Abdur Rahman, Honorary Secretary, Mahomedan Literary Society	234
31	Do. ...	Kamala Kanta Sen, Zemindar, President of the Chittagong Association	235
32	Do. ...	Sub-Committee of the District Board, 24-Pargannas ...	247
33	Do. ...	District Board, Patna	248
34	Do. ...	District Board Sub-Committee	249
35	Do. ...	Rai Bahadur Radha Ballav Chowdhuri, Honorary Magistrate	167
36	Do. ...	Arrah District Board	251
37	Do. ...	A. W. B. Power, Commissioner of the Burdwan Division ...	5
38	Assam ...	Surgeon-Major J. W. Macnamara, Civil Surgeon	20
39	Do. ...	C. W. E. Pittar, Officiating Deputy Commissioner ...	12
40	Do. ...	J. L. Herald, Deputy Commissioner	8
41	Do. ...	Ishan Chandra Patranavis, Extra Assistant Commissioner ...	13
42	Do. ...	G. Godfrey, Commissioner	1
43	Do. ...	G. A Gait, Director of Land Records and Agriculture ...	9
44	Do. ...	J J. S. Driberg, Commissioner of Excise	2
45	Do. ...	Lakshmikanta Barkagati, Secretary to the Tezpur Ryots Association	46
46	Do. ...	Radhanath Changakoti, Municipal Commissioner and Member, Local Board	47
47	N.-W. P.	Lieutenant-Colonel F Barrow, Deputy Commissioner	19
48	Do. ...	Syed Habibullah, Joint Magistrate	25
49	Do. ...	Khan Bahadur Syed Ali Husen, Revenue Member, Council of Regency	35
50	Do. ...	H C. Ferard, Collector and Magistrate	15
51	Do. ...	P. Allen, Officiating Collector	16

Serial No.	Province.	Name and Rank.	Number of the witness.
52	N.-W. P.	H. O. W. Robarts, Joint Magistrate and Excise Officer ...	32
53	Do. ...	P. Harrison, Officiating Collector	31
54	Do. ...	M. Zainulabdin, Deputy Collector	39
55	Do. ...	G. A. Tweedy, Collector	10
56	Do. ...	M. Hushmatullah, Joint Magistrate	30
57	Do. ...	Lala Nehal Chand, Honorary Magistrate	178
58	Do. ...	Lala Sheo Pershad, Rai Bahadur, Banker	254
59	Do. ...	Rai Bahadur M. Sheo Narain, Secretary, Municipal Board ...	226
60	Do. ...	Raja Jung Bahadur Khan, C.I.E.	181
61	Do. ...	Raja Luchman Singh, Government Pensioner and Zamindar ...	182
62	Do. ...	Choudry Basant Singh, Rai Bahadur, Zamindar ...	205
63	Do. ...	M. Nawul Kishore, C.I.E., Proprietor, "Nawul Kishore" Press...	231
64	Do. ...	Syed Muhammad Nuh, Zamindar and Member of District Board	227
65	Punjab ...	Surgeon-Major J. A. Cunningham, Civil Surgeon ...	35
66	Do. ...	Sirdar Balwant Singh, Extra Assistant Commissioner ...	23
67	Do. ...	J. A. Robinson, Extra Assistant Commissioner	10
68	Do. ...	Rai Bahadur Bhugwan Das, Extra Assistant Commissioner ...	18
69	Do. ...	Lieutenant-Colonel J. A. L. Montgomery, Deputy Commissioner	7
70	Do. ...	Sheikh Din Muhammad Khan, Extra Assistant Commissioner...	21
71	Do. ...	Sirdar Bahadur Luchmi Sahai, Extra Assistant Commissioner...	17
72	Do. ...	M. L. Dames, Deputy Commissioner	9
73	Do. ...	H. A. Anderson, Deputy Commissioner	12
74	Do. ...	R. S. Bruere, District Superintendent of Police	31
75	Do. ...	Bhugwan Das, Assistant Surgeon, in Medical Charge ...	36
76	Do. ...	J. R. Maconachie, Deputy Commissioner	8
77	Do. ...	Kaura Khan, Khan Bahadur, Zeildar	68
78	Do. ...	Major-General M. Millet (pensioner)	69
79	Do. ...	Bedi Sujan Singh, Honorary Magistrate	57
80	Central Provinces	Honorary Surgeon-Major J. E. Harrison, Civil Surgeon ...	38
81	Do. ...	Alam Chand, Superintendent	18
82	Do. ...	A. C. Duff, Deputy Commissioner	6
83	Do. ...	Mahomed Hossein, Extra Assistant Commissioner ...	15
84	Do. ...	B. Robertson, Deputy Commissioner	7
85	Do. ...	H. V. Drake-Brockman, Officiating Commissioner of Excise.	9
86	Do. ...	Rughu Nath Rao, Extra Assistant Commissioner ...	14
87	Do. ...	Bhargo Rao Gadjit, Extra Assistant Commissioner ...	12
88	Do. ...	Thakur Maharaj Singh, Rao Bahadur, Malguzar	62
89	Do. ...	Tara Das Banerji, President, District Board	70
90	Do. ...	Rao Saheb Bulwunt Rao Gobind Rao Bhuskute, Jagirdar ...	64
91	Do. ...	Hon'ble Gangadhur Rao Madhab Chitnavis, Member, Viceregal Council	46
92	Do. ...	Rao Sahib Rang Rao Hari, Pleader	72
93	Madras ...	S. H. Wynne, Collector	12
94	Do. ...	W. A. Willock, Collector	8
95	Do. ...	C. H. Mounsey, Collector	15
96	Do. ...	L. C. Miller, Acting Collector	18
97	Do. ...	F. D. A. O. Wolfe Murray, Acting Collector	17
98	Do. ...	H. Bradley, Acting Collector	14
99	Do. ...	E. Turner, Collector	3
100	Do. ...	C. J. Weir, Collector	20
101	Do. ...	R. Sewell, Collector	6
102	Do. ...	Honorable Rai Bahadur Sabapathy Mudaliar, Merchant ...	175
103	Do. ...	M. Azizuddin, Saheb Bahadur, Deputy Collector	37
104	Do. ...	J. Thomson, Collector	9
105	Do. ...	P. Pundari Kakshudu, Deputy Collector	32
106	Do. ...	J. H. Merriman, Deputy Commissioner of Salt and Abkari ...	28
107	Do. ...	Buldeo Dass, Priest of Hanuman Math	192
108	Do. ...	Rev. W. H. Campbell, Missionary	148
109	Do. ...	Azizuddin Ali Khan, Saheb Bahadur, Jagirdar	134
110	Do. ...	Raja of Ramad	127
111	Do. ...	P. Kesawa Pillai, Honorary Secretary, Gooty People's Association	173
112	Ditto ...	E. Subramana Iyer, Municipal Chairman	143

Serial No.	Province.	Name and Rank.	Number of witness.
113	Bombay	Dhanjisha Dadabhoy, District Superintendent of Police ...	58
114	Do. ...	J. E. Down, District Superintendent of Police	55
115	Do. ...	R. B. Narayan Bhikaji Jogalekar, Pensioned Deputy Collector and Karbari of Aundh State	36
116	Do. ...	A. H. Plunkett, City Magistrate	19
117	Do. ...	A. Cumine, Acting Collector	12
118	Do. ...	R. S. Pranshankar, Inspector of Police	62
119	Do. ...	J. Monteath, Collector	10
120	Do. ...	K. B. Nanabhai Kavasji, Police Inspector	60
121	Do. ...	R. A. Lamb, Collector	14
122	Do. ...	E. J. Ebden, Collector	5
123	Do. ...	Ram Chandra Raja Ram Mule, Administrator of Jath ...	33
124	Do. ...	R. W. E. H Vincent, C.I.E., Officiating Commissioner of Police	53
125	Do. ...	H. Woodward. Collector	11
126	Do. ...	Dr. Ganesh Krishna Garde, Medical Practitioner, Representative, Sarvajanick Sabha, Poona	91
127	Do. ...	Rao Bahadur Huchrao Achut, Harihar	106
128	Do. ...	Rao Bahadur Vishvanath Keshava Joglekar, Sahokar ...	110
129	Sindh ...	R. Giles, Collector	2
130	Do. ...	Dr. S. M. Kaka, Health Officer	24

NIHAL CHAND.

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